Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:ssspta1623kxg

PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * * * * * * Welcome to STN International * * * * * * * * * *

| | | |
|---|---|---|
| NEWS 1 | | Web Page URLs for STN Seminar Schedule - N. America |
| NEWS 2 | | "Ask CAS" for self-help around the clock |
| NEWS 3 | FEB 27 | New STN AnaVist pricing effective March 1, 2006 |
| NEWS 4 | APR 04 | STN AnaVist $500 visualization usage credit offered |
| NEWS 5 | MAY 10 | CA/CAplus enhanced with 1900-1906 U.S. patent records |
| NEWS 6 | MAY 11 | KOREAPAT updates resume |
| NEWS 7 | MAY 19 | Derwent World Patents Index to be reloaded and enhanced |
| NEWS 8 | MAY 30 | IPC 8 Rolled-up Core codes added to CA/CAplus and USPATFULL/USPAT2 |
| NEWS 9 | MAY 30 | The F-Term thesaurus is now available in CA/CAplus |
| NEWS 10 | JUN 02 | The first reclassification of IPC codes now complete in INPADOC |
| NEWS 11 | JUN 26 | TULSA/TULSA2 reloaded and enhanced with new search and and display fields |
| NEWS 12 | JUN 28 | Price changes in full-text patent databases EPFULL and PCTFULL |
| NEWS 13 | JUl 11 | CHEMSAFE reloaded and enhanced |
| NEWS 14 | JUl 14 | FSTA enhanced with Japanese patents |
| NEWS 15 | JUl 19 | Coverage of Research Disclosure reinstated in DWPI |

NEWS EXPRESS JUNE 30 CURRENT WINDOWS VERSION IS V8.01b, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 26 JUNE 2006.

| | |
|---|---|
| NEWS HOURS | STN Operating Hours Plus Help Desk Availability |
| NEWS LOGIN | Welcome Banner and News Items |
| NEWS IPC8 | For general information regarding STN implementation of IPC 8 |
| NEWS X25 | X.25 communication option no longer available |

Enter NEWS followed by the item number or name to see news on that specific topic.

All use of STN is subject to the provisions of the STN Customer agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

* * * * * * * * * * * * * * * * STN Columbus * * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 16:20:34 ON 25 JUL 2006

=> file reg

| COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION |
|---|---|---|
| FULL ESTIMATED COST | 0.21 | 0.21 |

FILE 'REGISTRY' ENTERED AT 16:20:58 ON 25 JUL 2006
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

```
Connecting via Winsock to STN


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LOGINID:ssspta1623kxg

PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2


* * * * * * * * * *   Welcome to STN International   * * * * * * * * * *

 NEWS  1           Web Page URLs for STN Seminar Schedule - N. America
 NEWS  2           "Ask CAS" for self-help around the clock
 NEWS  3  FEB 27   New STN AnaVist pricing effective March 1, 2006
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                   USPATFULL/USPAT2
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                   INPADOC
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 NEWS 14  JUl 14   FSTA enhanced with Japanese patents
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 NEWS EXPRESS  JUNE 30 CURRENT WINDOWS VERSION IS V8.01b, CURRENT
               MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
               AND CURRENT DISCOVER FILE IS DATED 26 JUNE 2006.

 NEWS HOURS    STN Operating Hours Plus Help Desk Availability
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  result in loss of user privileges and other penalties.

* * * * * * * * * * * * * * * * STN  Columbus  * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 16:00:35 ON 04 AUG 2006

=> file reg
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                     0.21       0.21

FILE 'REGISTRY' ENTERED AT 16:00:52 ON 04 AUG 2006
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
```

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.


Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 3 AUG 2006 HIGHEST RN 898599-49-0
DICTIONARY FILE UPDATES: 3 AUG 2006 HIGHEST RN 898599-49-0

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 6, 2006

Please note that search-term pricing does apply when conducting SmartSELECT searches.

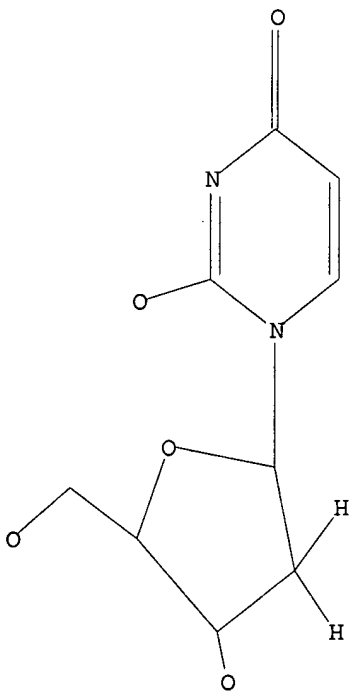
REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/ONLINE/UG/regprops.html

=>
Uploading C:\Program Files\Stnexp\Queries\10736084-4.str

L1 STRUCTURE UPLOADED

=> d l1
L1 HAS NO ANSWERS
L1 STR




Structure attributes must be viewed using STN Express query preparation.

=> s l1 sss sam
SAMPLE SEARCH INITIATED 16:01:22 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 3884 TO ITERATE

51.5% PROCESSED 2000 ITERATIONS 50 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 73943 TO 81417
PROJECTED ANSWERS: 42659 TO 48381

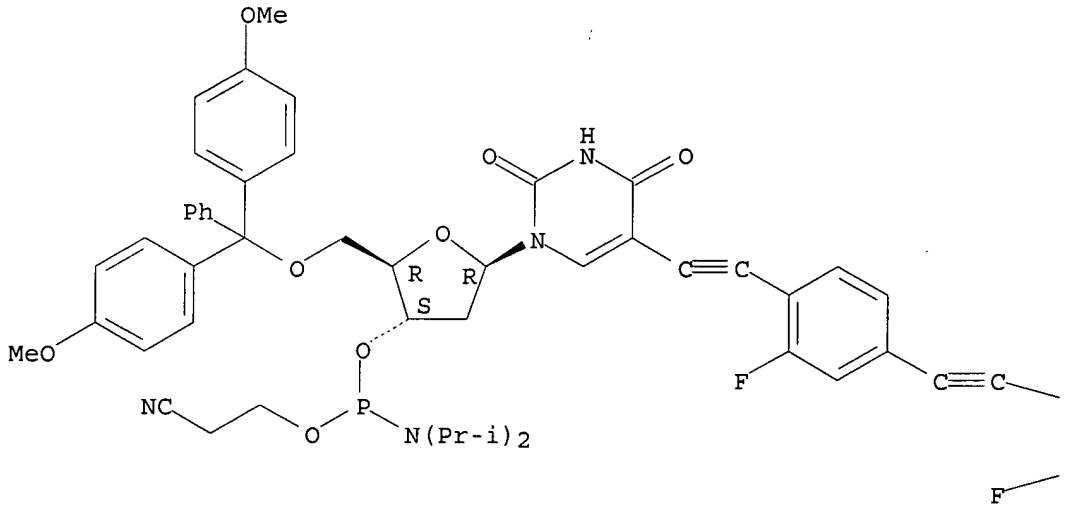
L2 50 SEA SSS SAM L1

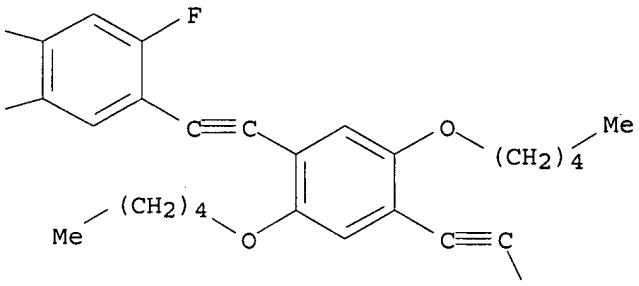
=> d scan

L2 50 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN
IN Uridine, 5'-O-[bis(4-methoxyphenyl)phenylmethyl]-5-[[4-[[4-[[2,5-bis(pentyloxy)-4-[[4-[[2-(4-pyridinyl)ethyl]thio]phenyl]ethynyl]phenyl]ethynyl]-2,5-difluorophenyl]ethynyl]-2-fluorophenyl]ethynyl]-2'-deoxy-, 3'-[2-cyanoethyl bis(1-methylethyl)phosphoramidite] (9CI)
MF C88 H87 F3 N5 O10 P S

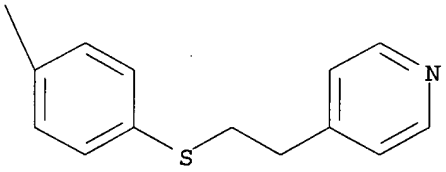
Absolute stereochemistry.









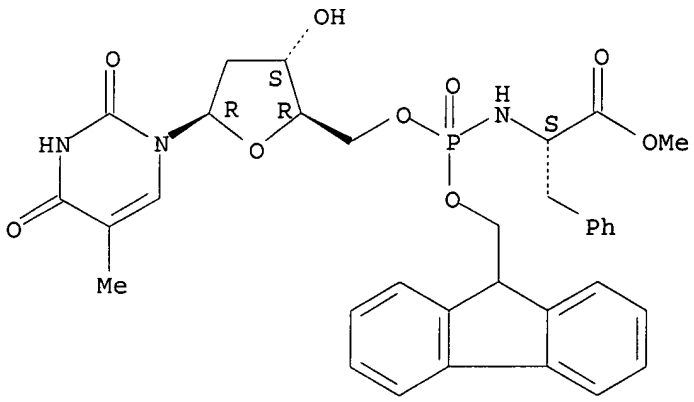


**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L2 50 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN
IN L-Phenylalanine, N-[P-(9H-fluoren-9-ylmethyl)-5'-thymidylyl]-, methyl ester (9CI)
MF C34 H36 N3 O9 P

Absolute stereochemistry.




**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):end

=> s l2 sss full
FULL SEARCH INITIATED 16:03:04 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 80832 TO ITERATE

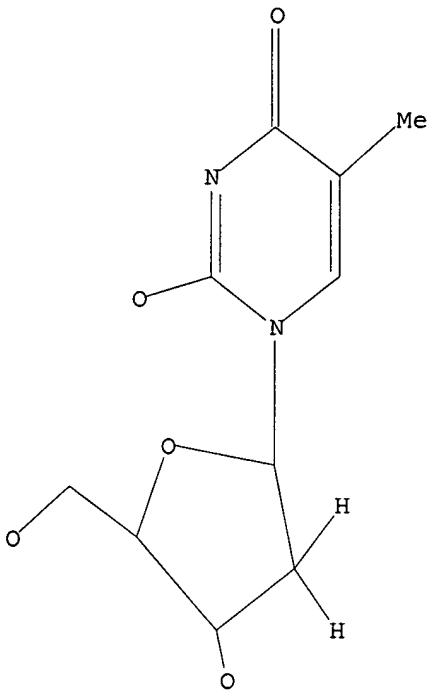
100.0% PROCESSED 80832 ITERATIONS 48760 ANSWERS
SEARCH TIME: 00.00.01

L3 48760 SEA SSS FUL L1

=>
Uploading C:\Program Files\Stnexp\Queries\10736084-5.str

L4 STRUCTURE UPLOADED

=> d l4
L4 HAS NO ANSWERS
L4 STR




Structure attributes must be viewed using STN Express query preparation.

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=> s l4 sss sam
SAMPLE SEARCH INITIATED 16:04:59 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED -     2713 TO ITERATE

 73.7% PROCESSED     2000 ITERATIONS                                 50 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:         51136 TO    57384
PROJECTED ANSWERS:            34609 TO    39781

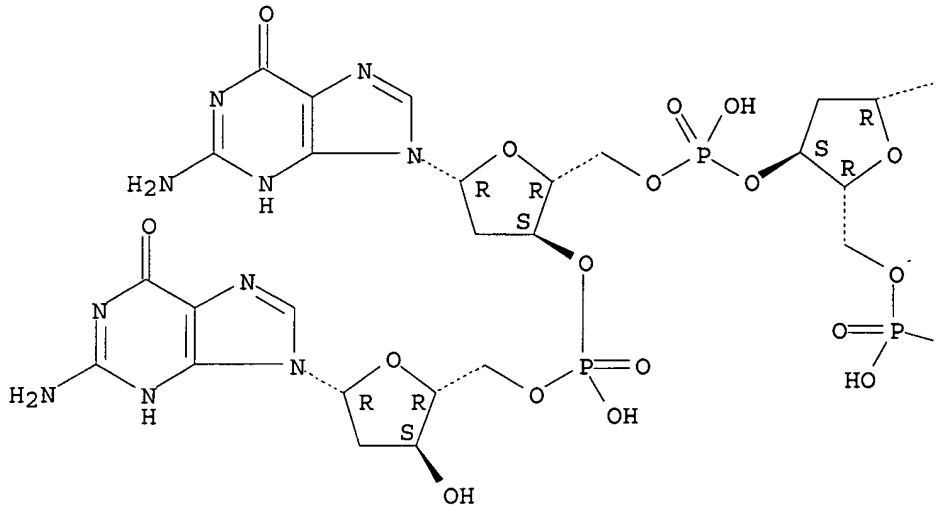
L5            50 SEA SSS SAM L4

=> d scan

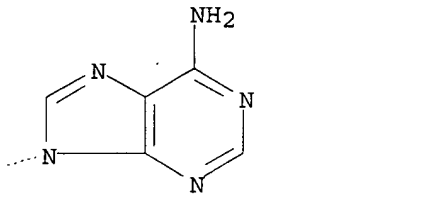
L5    50 ANSWERS   REGISTRY  COPYRIGHT 2006 ACS on STN
IN    INDEX NAME NOT YET ASSIGNED
MF    C101 H150 N31 O70 P11 . C77 H98 N31 O46 P7

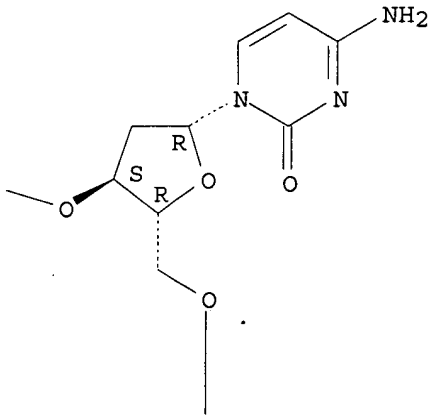
      CM   1

Absolute stereochemistry.
```

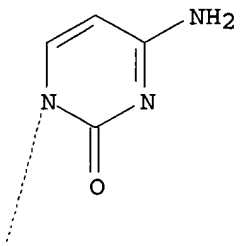




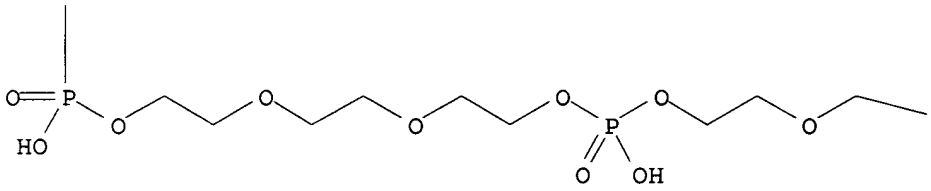




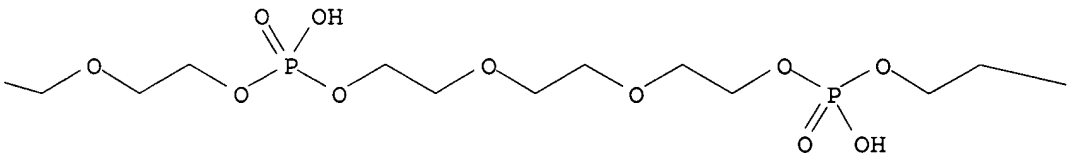
PAGE 1-D



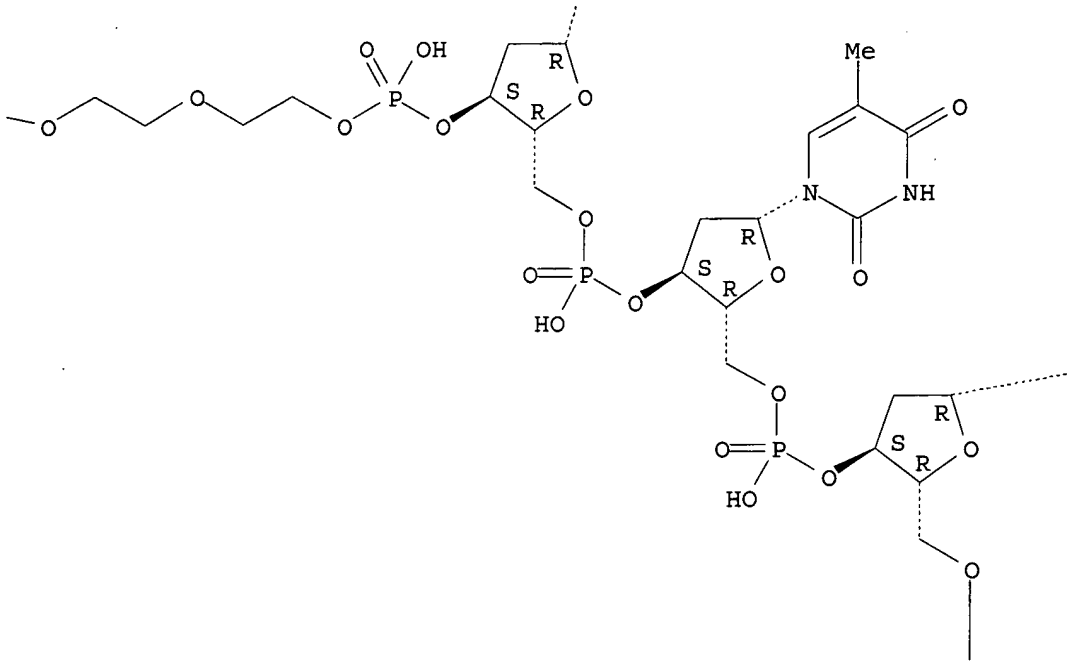

PAGE 2-B



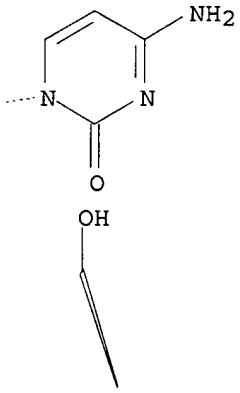

PAGE 2-C



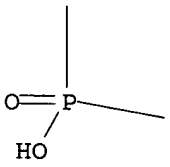
PAGE 2-D



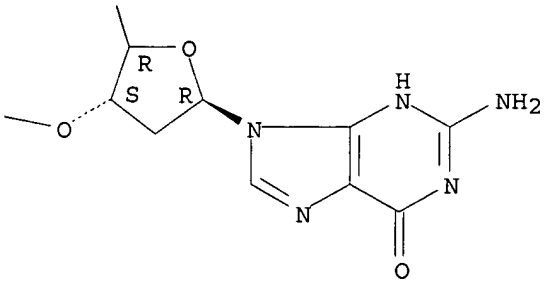
PAGE 2-E



PAGE 3-D



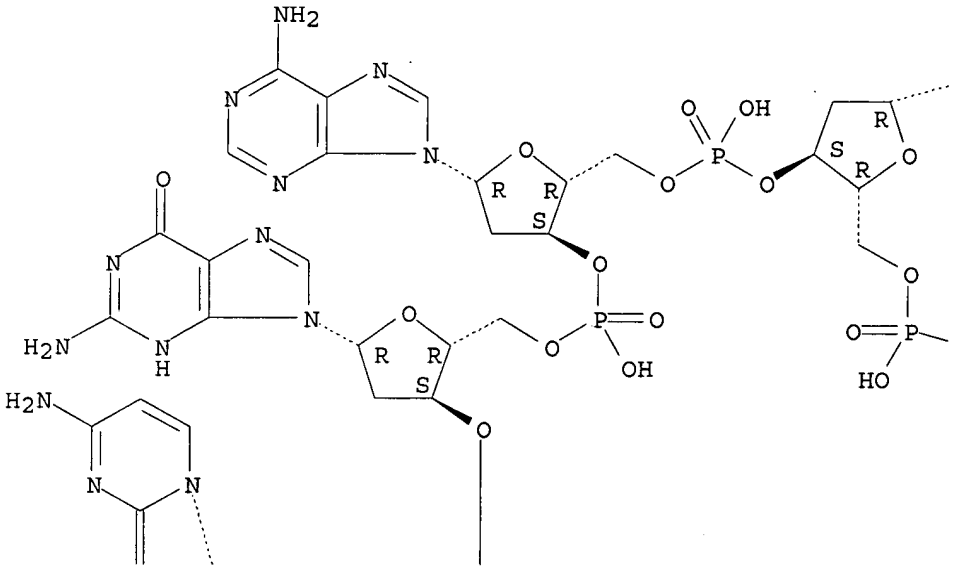
PAGE 3-E



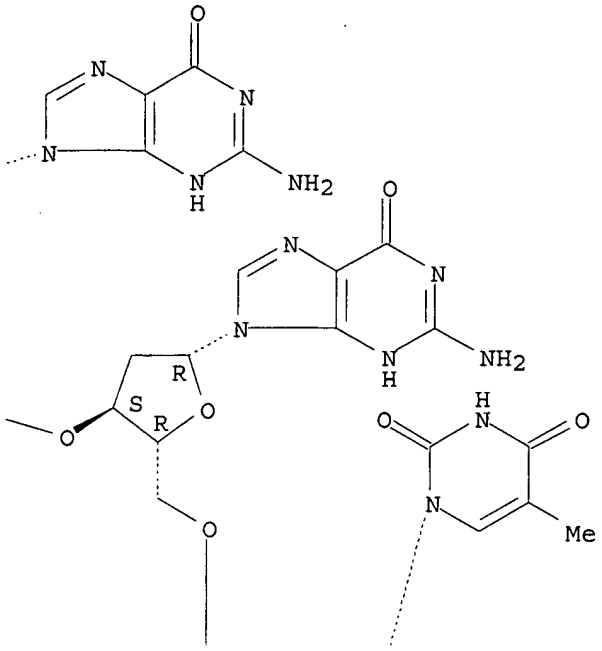
CM 2

Absolute stereochemistry.

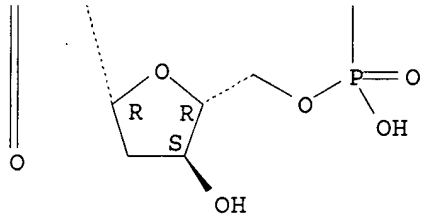
PAGE 1-A



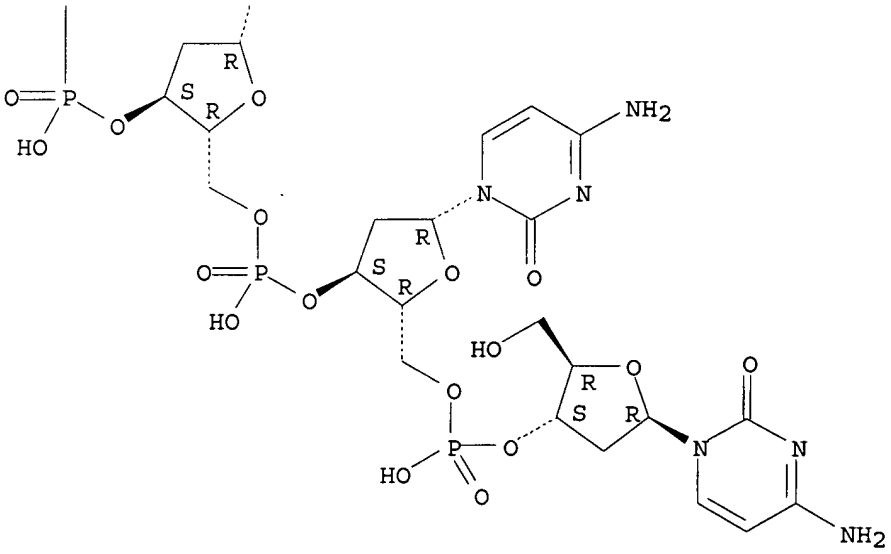
PAGE 1-B



PAGE 2-A



PAGE 2-B

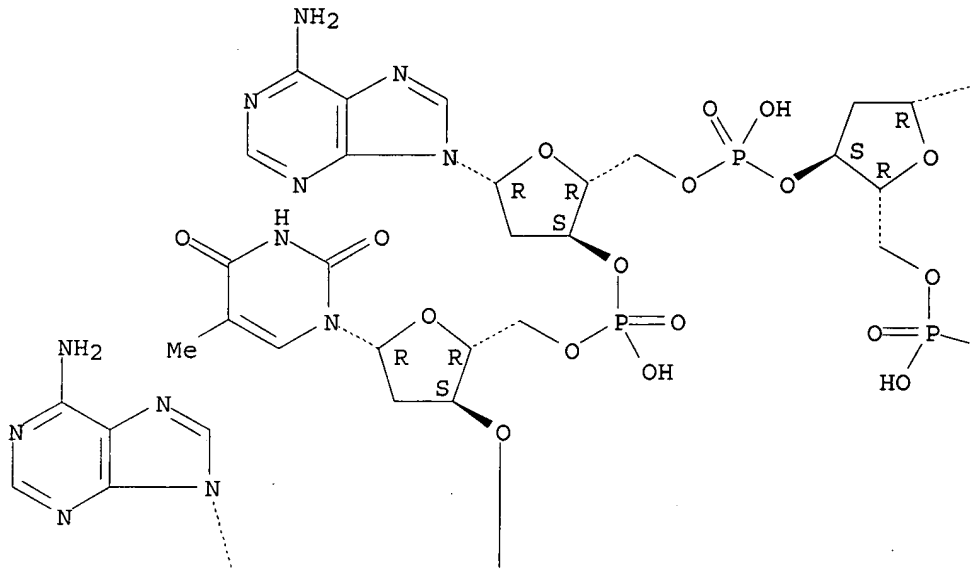


HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

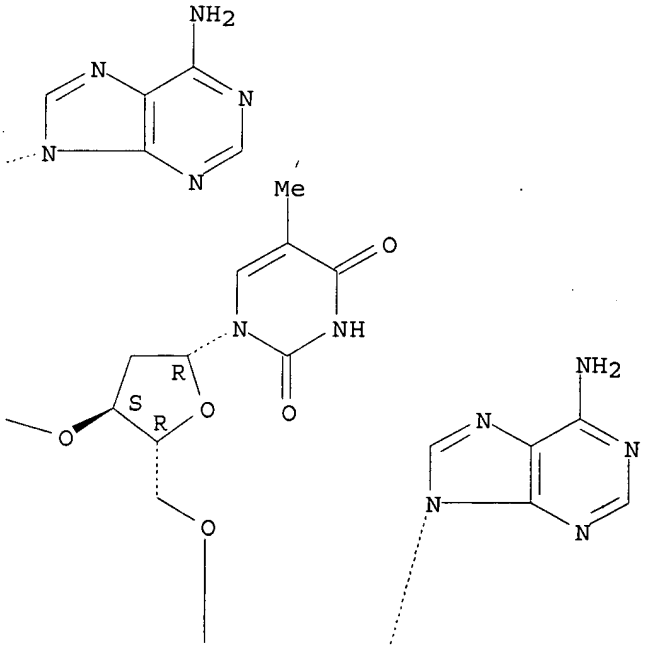
L5 50 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN
IN INDEX NAME NOT YET ASSIGNED
MF C79 H100 N29 O45 P7

Absolute stereochemistry.

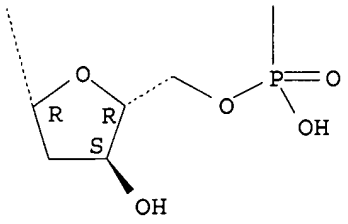
PAGE 1-A



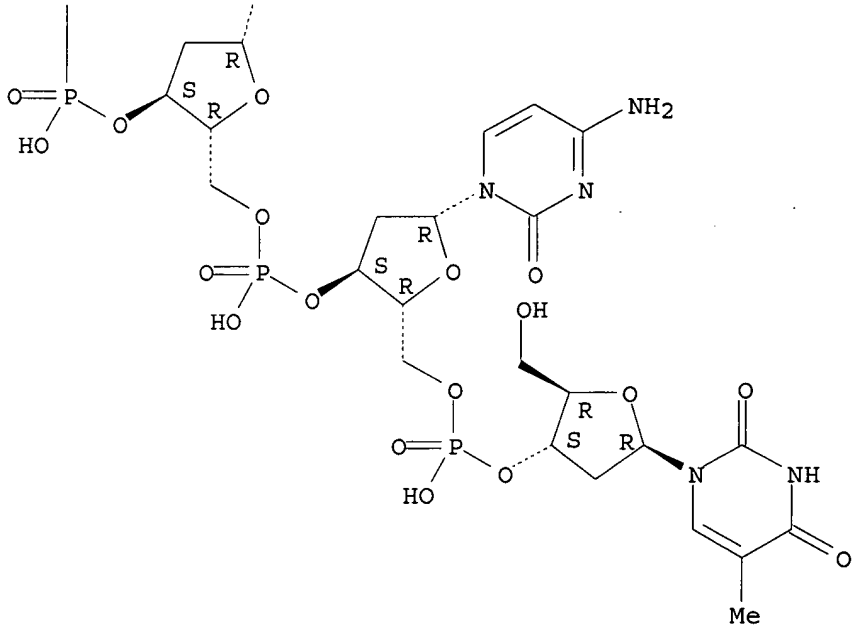
PAGE 1-B



PAGE 2-A



PAGE 2-B



**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):end

=> s l4 sss full
FULL SEARCH INITIATED 16:06:16 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 57347 TO ITERATE

100.0% PROCESSED 57347 ITERATIONS 39556 ANSWERS
SEARCH TIME: 00.00.01

L6 39556 SEA SSS FUL L4

=> file caplus

| COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION |
|---|---|---|
| FULL ESTIMATED COST | 336.96 | 337.17 |

FILE 'CAPLUS' ENTERED AT 16:06:25 ON 04 AUG 2006
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PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

FILE COVERS 1907 - 4 Aug 2006 VOL 145 ISS 7
FILE LAST UPDATED: 3 Aug 2006 (20060803/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply.
They are available for your review at:

http://www.cas.org/infopolicy.html

```
=> s l6 and mesyl?
         29282 L6
         14408 MESYL?
L7         106 L6 AND MESYL?

=> s l7 and method
       3153173 METHOD
       1288940 METHODS
       4079104 METHOD
                 (METHOD OR METHODS)
L8          19 L7 AND METHOD

=> dis l8 1-19 bib abs hitstr

L8   ANSWER 1 OF 19  CAPLUS  COPYRIGHT 2006 ACS on STN
AN   2006:209715  CAPLUS
DN   144:292126
TI   Methods, compositions, and apparatuses for forming macrocyclic
     compounds
IN   Johnson, Thomas E.; Fowler, Billy T.
PA   USA
SO   PCT Int. Appl., 85 pp.
     CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.         DATE
     --------------      ----   --------    --------------------    --------
PI   WO 2006025859        A2    20060309    WO 2005-US5028          20050217
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
             LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
             NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM,
             SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
             IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF,
             CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM,
             KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG,
             KZ, MD, RU, TJ, TM
PRAI US 2004-545131P      P     20040217
     US 2005-59796        A     20050217
GI
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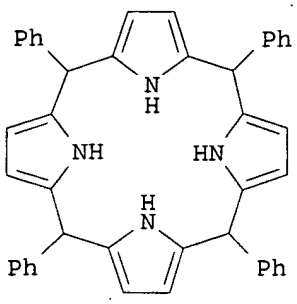


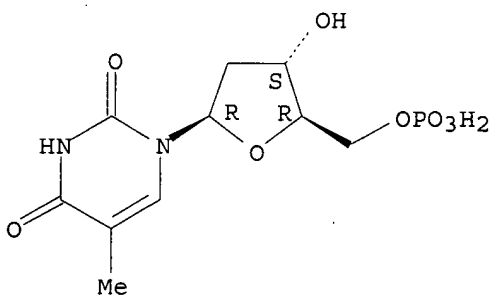

I

AB The invention is related to a process for manufacturing of at least one macrocyclic compound, e.g. tetraphenylporphyrogen I, by (a) providing a reaction system comprising one or more reactants in a reaction medium, which are capable of forming the macrocycle through a desired reaction pathway that includes at least cyclization reaction(s), and which are further capable of forming undesired oligomers through at least one undesired reaction pathway that includes undesirable oligomerization reactions; and (b) modulating oligomerization reactions in the reaction medium, so as to reduce formation of the undesired oligomers and/or to reduce separation of the undesired oligomers from the reaction medium, relative to corresponding unmodulated oligomerization reactions. Oligomerization control additives are claimed. Cyclization solvents, and solvents that assist with spontaneous separation of the macrocycle from the reaction medium, are also claimed. Reaction of benzaldehyde with pyrrole in a reaction composition that contained about 37.5% by volume MeOH (precipitating solvent), 62.5% by volume H2O (oligomerization control additive), and 0.014 g/mL NaCl (separation additive) gave tetraphenylporphyrogen I, in about 85% yield, compared to less than 1% in the absence of any oligomerization control. Prophetic examples of addnl. potential macrocyclic compds., e.g. porphyrins, macrocyclic imines, aryl boronates, crown ethers, cyclic peptides, etc., are also given and claimed.

IT 365-07-1P, Thymidine 5'-monophosphate 491-97-4P, Thymidine diphosphate
RL: BYP (Byproduct); RGT (Reagent); PREP (Preparation); RACT (Reactant or reagent)
(oligomerization control additive; preparation of macrocyclic compds. via macrocyclization by modulating oligomerization reactions in the reaction medium)

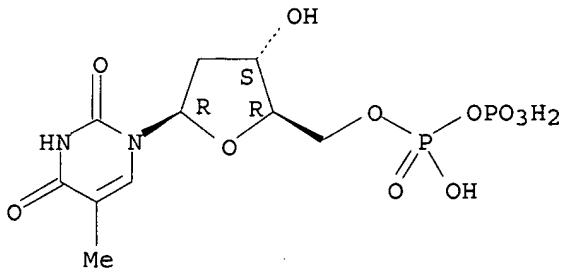
RN 365-07-1 CAPLUS
CN 5'-Thymidylic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.




RN 491-97-4 CAPLUS
CN Thymidine 5'-(trihydrogen diphosphate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.




L8 ANSWER 2 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:1328666 CAPLUS
DN 144:50033
TI Vaccine compositions diminishing side effects
IN Buller, Robert Mark L.
PA Saint Louis University, USA
SO PCT Int. Appl., 30 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | WO 2005121378 | A2 | 20051222 | WO 2005-US18682 | 20050526 |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI US 2004-576840P P 20040603

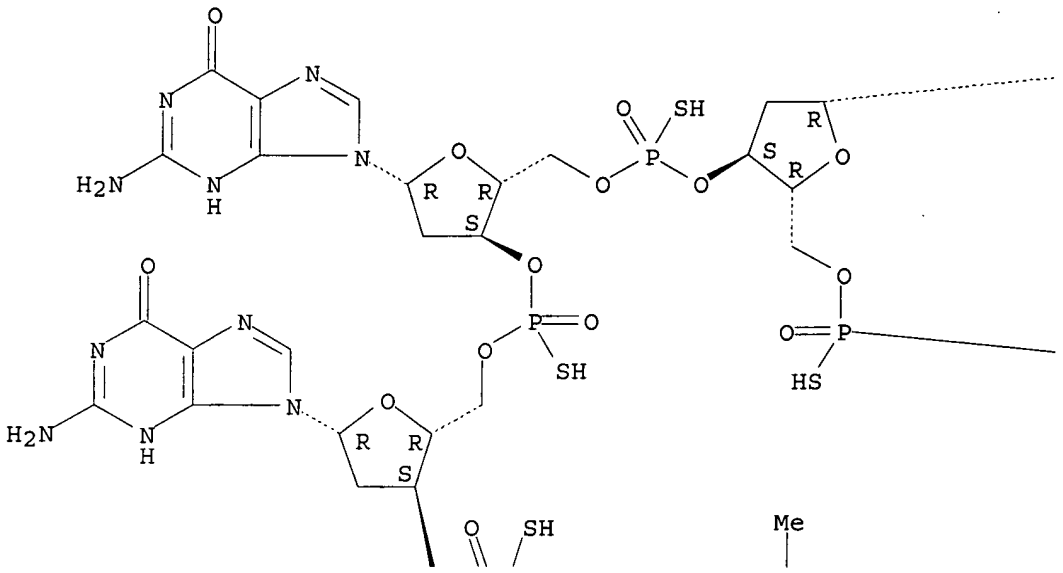
AB The invention provides kits, methods and compns. of matter which improve the safety of vaccination. By combining the administration of antiviral drugs, particularly ester derivs. of cidofovir, with the administration of viral vaccines, particularly the variola vaccine DryVax, side effects of the vaccine are diminished without significantly affecting the effectiveness of the vaccine.

IT 154719-23-0, ISIS 5320
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(administration of antiviral drugs with viral vaccines diminishes adverse side effects)

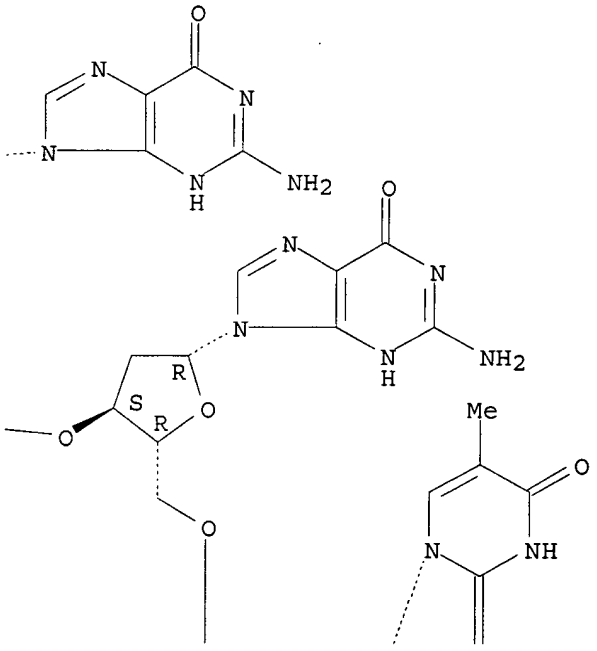
RN 154719-23-0 CAPLUS
CN Thymidine, P-thiothymidylyl-(3'→5')-P-thiothymidylyl-(3'→5')-2'-deoxy-P-thioguanylyl-(3'→5')-2'-deoxy-P-thioguanylyl-(3'→5')-2'-deoxy-P-thioguanylyl-(3'→5')-2'-deoxy-P-thioguanylyl-(3'→5')-P-thiothymidylyl-(3'→5')- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

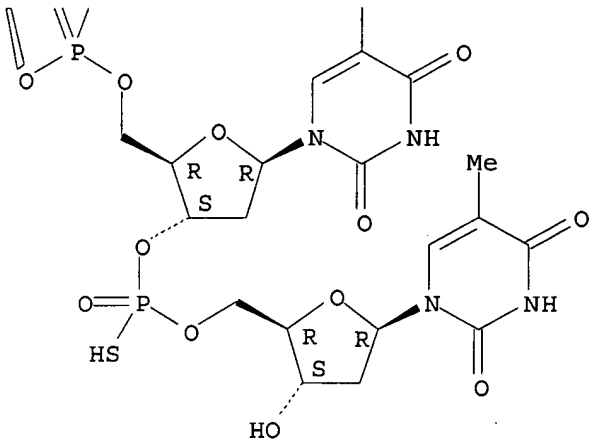
PAGE 1-A



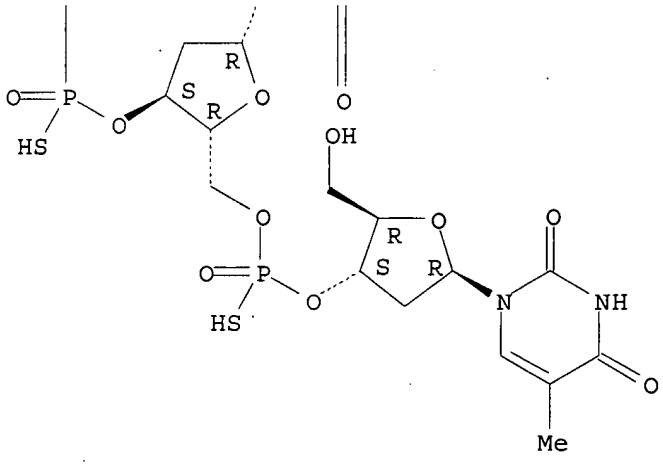
PAGE 1-B



PAGE 2-A



PAGE 2-B



L8 ANSWER 3 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:756831 CAPLUS
DN 141:271997
TI Methods for the synthesis and screening of insulin-like growth factor-I (IGF-I) and growth hormone receptor (GHR) modulators and therapeutic uses thereof
IN Tachas, George; Dobie, Kenneth
PA Isis Pharmaceuticals, Inc., USA
SO PCT Int. Appl., 293 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 2

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | WO 2004078922 | A2 | 20040916 | WO 2004-US5896 | 20040227 |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN,

GQ, GW, ML, MR, NE, SN, TD, TG

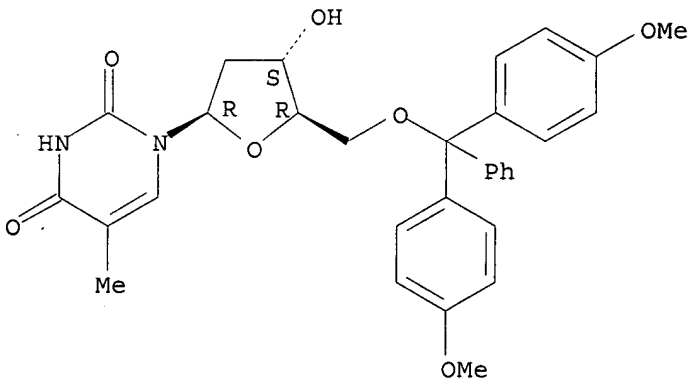
| | | | | | |
|---|---|---|---|---|---|
| | US 2004253723 | A1 | 20041216 | US 2004-789526 | 20040226 |
| | AU 2004217508 | A1 | 20040916 | AU 2004-217508 | 20040227 |
| | CA 2517101 | AA | 20040916 | CA 2004-2517101 | 20040227 |
| | EP 1664267 | A2 | 20060607 | EP 2004-715642 | 20040227 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, SK | | | | |
| PRAI | US 2003-451455P | P | 20030228 | | |
| | US 2003-490230P | P | 20030725 | | |
| | US 2004-789526 | A | 20040226 | | |
| | WO 2004-US5896 | W | 20040227 | | |

AB Compds., compns. and methods are provided for modulating the expression of growth hormone receptor and/or insulin like growth factor-I (IGF-I). The compns. comprise oligonucleotides, targeted to nucleic acid encoding growth hormone receptor. Methods of using these compds. for modulation of growth hormone receptor expression and for diagnosis and treatment of disease associated with expression of growth hormone receptor and/or insulin-like growth factor-I are provided. Diagnostic methods and kits are also provided.

IT 40615-39-2P
RL: DGN (Diagnostic use); PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(-conjugated oligonucleotides; methods for synthesis and screening of insulin-like growth factor-I (IGF-I) and growth hormone receptor (GHR) oligonucleotidic modulators and therapeutic uses thereof)

RN 40615-39-2 CAPLUS
CN Thymidine, 5'-O-[bis(4-methoxyphenyl)phenylmethyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

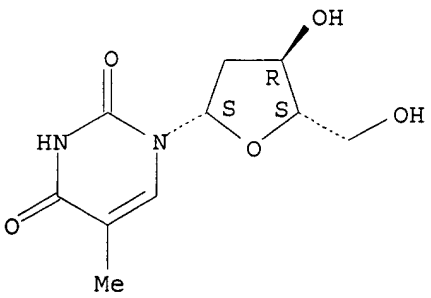



L8 ANSWER 4 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:41226 CAPLUS
DN 140:105321
TI Methods and compositions relating to isoleucine boroproline compounds
IN Adams, Sharlene; Miller, Glenn T.; Jesson, Michael I.; Jones, Barry
PA Point Therapeutics, Inc., USA
SO PCT Int. Appl., 152 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 2

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | WO 2004004658 | A2 | 20040115 | WO 2003-US21405 | 20030709 |

WO 2004004658 A3 20050804
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
CA 2491466 AA 20040115 CA 2003-2491466 20030709
AU 2003265264 A1 20040123 AU 2003-265264 20030709
US 2004077601 A1 20040422 US 2003-616694 20030709
US 2005084490 A1 20050421 US 2003-616409 20030709
EP 1578434 A2 20050928 EP 2003-763380 20030709
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
JP 2006507352 T2 20060302 JP 2004-562634 20030709
CN 1802090 A 20060712 CN 2003-821282 20030709
PRAI US 2002-394856P P 20020709
US 2002-414978P P 20021001
US 2003-466435P P 20030428
WO 2003-US21405 W 20030709
OS MARPAT 140:105321
AB A method for treating subjects with, inter alia, abnormal cell proliferation or infectious disease using agents of formula (I, AmNHCH(CH(CH3)CH2CH3)COA1R) (where Am and A1 are amino acids and R = organo boronates, organo phosphonates, fluoroalkyl ketones, alphaketos, N-peptiolyl-O-(acylhydroxylamines), azapeptides, azetidines, fluoroolefins dipeptide isosteres, peptidyl (α-aminoalkyl) phosphonate esters, aminoacyl pyrrolidine-2-nitriles and 4-cyanothiazolidides) is claimed. Methods for stimulating an immune response using the compds. of the invention are also claimed. Compns. containing Ile-boroPro compds. are also provided as are kits containing the compns. The invention embraces the use of these compds. alone or in combination with other therapeutic agents.
IT 3424-98-4
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(therapeutic methods and compns. relating to isoleucine boroproline compds. alone or in combination with other drugs, antibodies, or antigens)
RN 3424-98-4 CAPLUS
CN 2,4(1H,3H)-Pyrimidinedione, 1-(2-deoxy-β-L-erythro-pentofuranosyl)-5-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

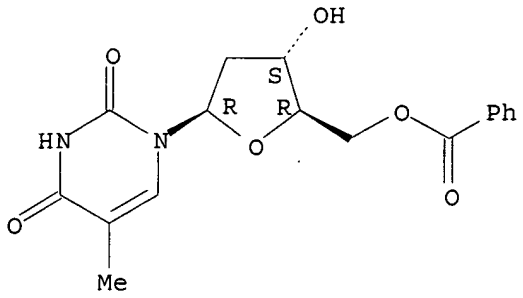


AN 2003:263189 CAPLUS
DN 138:238390
TI Process for large-scale preparation of the antiviral agent 2',3'-didehydro-3'-deoxythymidine (stavudine) via one-step elimination reaction and alcoholysis of benzoylthymidine sulfonates, and purification via a solid solvate with N,N-dimethylacetamide (DMA)
IN Fochi, Mariacristina; Sala, Alberto
PA Industriale Chimica S.r.l., Italy
SO Ital., 17 pp.
CODEN: ITXXBY
DT Patent
LA Italian
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | IT 1303250 | B1 | 20001106 | IT 1998-MI2289 | 19981026 |
| PRAI | IT 1998-MI2289 | | 19981026 | | |

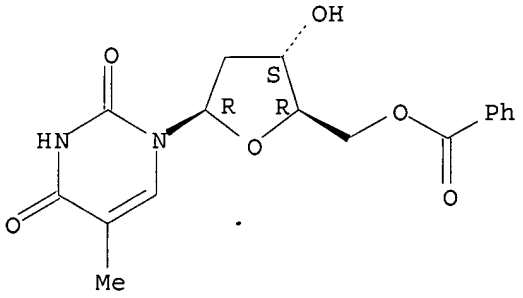
OS CASREACT 138:238390
AB The antiviral and anti-HIV agent 2',3'-didehydro-3'-deoxythymidine (stavudine; I) is prepared on a large scale with good purity by a new process. The process involves a single-step elimination reaction and alcoholysis of 5'-O-benzoyl-3'-O-[(alkyl/aryl)sulfonyl]thymidines in the presence of a base. The obtained crude I is then purified, preferably by reaction with N,N-dimethylacetamide (DMA) to give a solid solvate, which is then desolvated. In particular, I is treated with DMA to give I.(0.75 DMA), which is desolvated by treatment with BuOAc, iso-PrOH, or acetone. For example, thymidine underwent 5'-O-benzoylation by benzoyl chloride in pyridine (84%), and 3'-O-mesylation by MeSO2Cl in pyridine (93%), to give 5'-O-benzoyl-3'-O-(methanesulfonyl)thymidine (II). This mesylate was converted to crude I by either: (a) treatment with KOBu-tert in DMF for 4 h at ambient temperature; or (b) treatment with KOBu-tert in DMF-THF mixture for 1 h at ambient temperature, followed by addition of NaOMe and addnl. stirring for 1 h at ambient temperature Crude I from either method was dissolved in DMA at ambient temperature by briefly heating to 40° and cooling, then stirred and treated with iso-Pr ether to precipitate I.(0.75 DMA). This solid solvate was filtered, re-suspended in DMA, treated at room temperature with iso-Pr ether, stirred 1 h, and filtered again. The solvate was desolvated by dissoln. under heating in iso-PrOH, treatment with carbon, filtration, concentration in vacuo, cooling, filtration, and drying. I was obtained from II in 40 and 50% yields, with HPLC purities of 99.1% and 99.0%, resp., via the two aforementioned elimination/alcoholysis methods.
IT 35898-29-4DP, 5'-O-Benzoylthymidine, 3'-O-alkyl- and -arylsulfonyl derivs. 35898-29-4P, 5'-O-Benzoylthymidine 107180-53-0P , 5'-O-Benzoyl-3'-O-tosylthymidine 165047-02-9P, 5'-O-Benzoyl-3'-O-methanesulfonylthymidine
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; large-scale preparation of didehydrodeoxythymidine (stavudine) via elimination/alcoholyisis of benzoylthymidine sulfonates, and purification via a solid solvate with dimethylacetamide (DMA))
RN 35898-29-4 CAPLUS
CN Thymidine, 5'-benzoate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



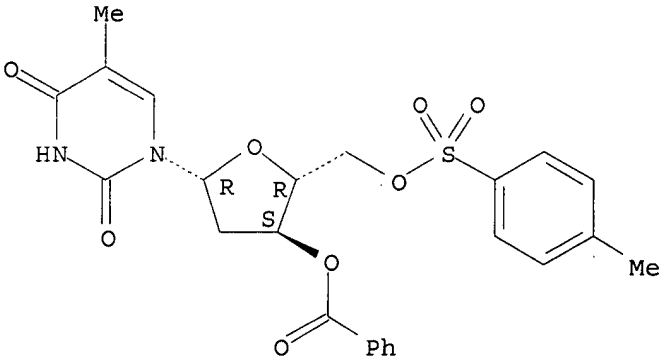
RN 35898-29-4 CAPLUS
CN Thymidine, 5'-benzoate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



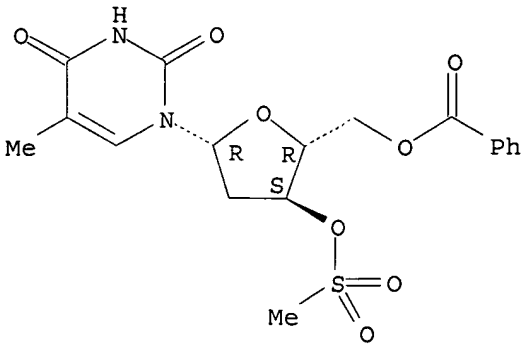
RN 107180-53-0 CAPLUS
CN Thymidine, 3'-benzoate 5'-(4-methylbenzenesulfonate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



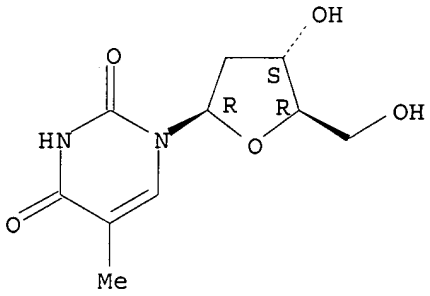
RN 165047-02-9 CAPLUS
CN Thymidine, 5'-benzoate 3'-methanesulfonate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 50-89-5, Thymidine, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(starting material; large-scale preparation of didehydrodeoxythymidine (stavudine) via elimination/alcoholyisis of benzoylthymidine sulfonates, and purification via a solid solvate with dimethylacetamide (DMA))
RN 50-89-5 CAPLUS
CN Thymidine (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



L8 ANSWER 6 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2003:263188 CAPLUS
DN 138:238389
TI Industrial process for the purification of the antiviral agent 2',3'-didehydro-3'-deoxythymidine (stavudine) via its solid solvate with N,N-dimethylacetamide (DMA)
IN Fochi, Mariacristina; Sala, Alberto
PA Industriale Chimica S.r.l., Italy
SO Ital., 17 pp.
CODEN: ITXXBY
DT Patent
LA Italian
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI IT 1303251 | B1 | 20001106 | IT 1998-MI2290 | 19981026 |
| PRAI IT 1998-MI2290 | | 19981026 | | |

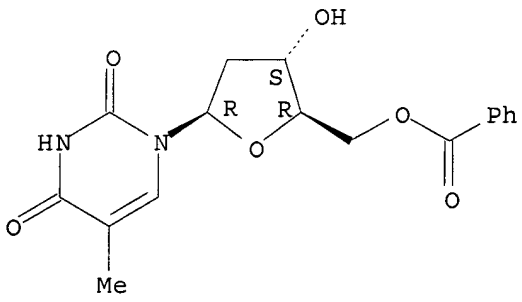
OS CASREACT 138:238389
AB The antiviral and anti-HIV agent 2',3'-didehydro-3'-deoxythymidine (stavudine; I) is purified by reaction with N,N-dimethylacetamide (DMA) to give a solid solvate, which is then desolvated. In particular, I is treated with DMA to give I.(0.75 DMA), which is desolvated by treatment with BuOAc, iso-PrOH, or acetone. The crude I is typically obtained by combined elimination reaction and alcoholysis of 5'-O-benzoyl-3'-O-[(alkyl/aryl)sulfonyl]thymidines. For example, thymidine underwent

5'-O-benzoylation by benzoyl chloride in pyridine (84%) and 3'-O-mesylation by MeSO2Cl in pyridine (93%) to give 5'-O-benzoyl-3'-O-(methanesulfonyl)thymidine (II). This mesylate was treated at ambient temperature with either (a) KOBu-tert in DMF, or (b) KOBu-tert and then NaOMe in a DMF-THF mixture, to give crude I. Crude I from either method was dissolved in DMA at ambient temperature by briefly heating to 40° and cooling, then stirred and treated with iso-Pr ether to precipitate I.(0.75 DMA). This solid solvate was filtered, re-suspended in DMA, treated at room temperature with iso-Pr ether, stirred 1 h, and filtered again. The solvate was desolvated by dissoln. under heating in iso-PrOH, treatment with carbon, filtration, concentration in vacuo, cooling, filtration, and drying. I was obtained from II in 40 and 50% yields, and HPLC purities of 99.1% and 99.0%, resp., via the two aforementioned elimination/alcoholysis methods.

IT 35898-29-4DP, 5'-O-Benzoylthymidine, 3'-O-alkyl- and -arylsulfonyl derivs. 35898-29-4P, 5'-O-Benzoylthymidine 165047-02-9P, 5'-O-Benzoyl-3'-O-methanesulfonylthymidine
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; industrial preparation and purification of didehydrodeoxythymidine (stavudine) via its solid solvate with dimethylacetamide (DMA))

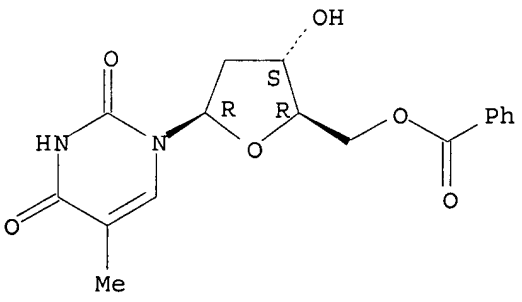
RN 35898-29-4 CAPLUS
CN Thymidine, 5'-benzoate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



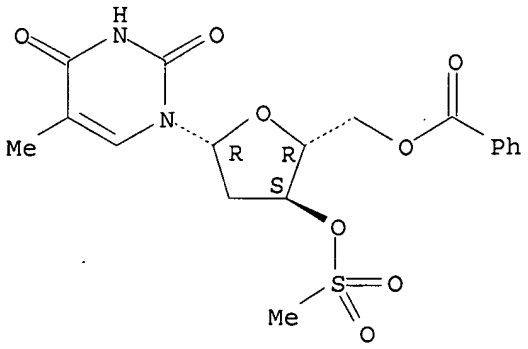

RN 35898-29-4 CAPLUS
CN Thymidine, 5'-benzoate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



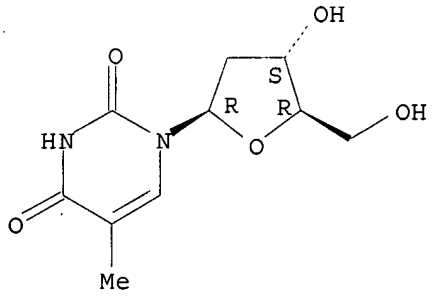

RN 165047-02-9 CAPLUS
CN Thymidine, 5'-benzoate 3'-methanesulfonate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 50-89-5, Thymidine, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(starting material; industrial preparation and purification of didehydrodeoxythymidine (stavudine) via its solid solvate with dimethylacetamide (DMA))
RN 50-89-5 CAPLUS
CN Thymidine (8CI, 9CI) (CA INDEX NAME)

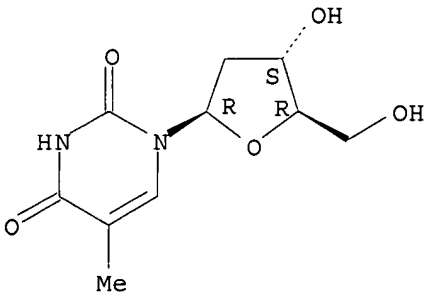
Absolute stereochemistry.



L8 ANSWER 7 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2003:114477 CAPLUS
DN 139:261493
TI Simple and efficient method for the synthesis of 2',3'-didehydro-3'-deoxythymidine (d4T)
AU Paramashivappa, R.; Phani Kumar, P.; Subba Rao, P. V.; Srinivasa Rao, A.
CS Vittal Mallya Scientific Research Foundation, Bangalore, 560 004, India
SO Tetrahedron Letters (2003), 44(5), 1003-1005
CODEN: TELEAY; ISSN: 0040-4039
PB Elsevier Science B.V.
DT Journal
LA English
OS CASREACT 139:261493
AB 2',3'-Didehydro-3'-deoxythymidine (d4T) is an orally active antiviral drug used in the treatment of AIDS. A novel two-step synthetic method was developed for the synthesis of d4T using inexpensive reagents from thymidine via mesylation, intramol. nucleophilic substitution, abstraction of a proton from the oxetane followed by ring opening reactions. An improvement in the yield was achieved for the conversion of the intermediate oxetane to d4T. This is the first simple and efficient method for the large-scale synthesis of d4T.
IT 50-89-5, Thymidine, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(simple and efficient method for the synthesis of 2',3'-didehydro-3'-deoxythymidine (d4T) from thymidine via intramol

nucleophilic substitution and ring opening)
RN 50-89-5 CAPLUS
CN Thymidine (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.




RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 8 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:907167 CAPLUS
DN 138:16588
TI Method for modulating expression of exogenous genes in mammalian systems using modified ecdysone receptors for gene therapy
IN Evans, Ronald M.; No, David; Saez, Enrique
PA The Salk Institute for Biological Studies, USA
SO U.S. Pat. Appl. Publ., 43 pp., Cont.-in-part of U.S. Ser. No. 974,530, abandoned.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 2

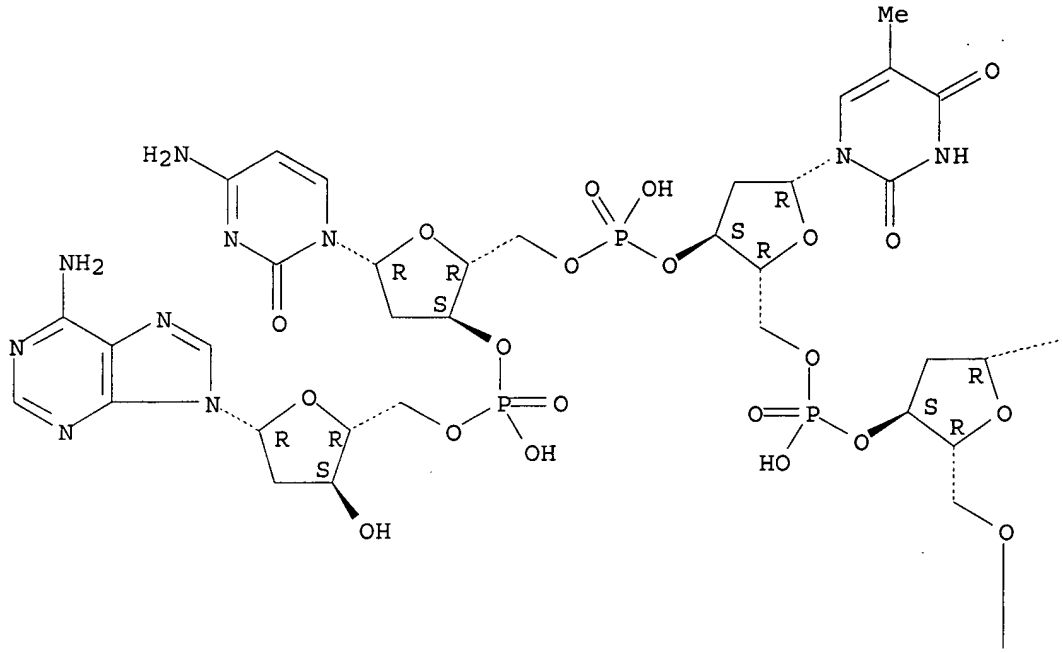
| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | US 2002177564 | A1 | 20021128 | US 1998-42488 | 19980316 |
| | US 6723531 | B2 | 20040420 | | |
| | US 2006014711 | A1 | 20060119 | US 2004-828831 | 20040420 |
| PRAI | US 1996-628830 | B2 | 19960405 | | |
| | US 1997-974530 | B2 | 19971119 | | |
| | US 1998-42488 | A1 | 19980316 | | |

AB The present invention provides various methods for modulating the expression of an exogenous gene in a mammalian subject employing modified ecdysone (ecdysteroid) receptors in steroid inducible system. Modified ecdysone receptors can be in the form of homodimeric species or heterodimeric species comprising at least one silent partner of the steroid/thyroid hormone superfamily of receptors, along with an invention modified ecdysone receptor. There are provided nucleic acids encoding modified ecdysone receptors, modified ecdysone receptor response elements, gene transfer vectors, recombinant cells, and transgenic animals containing nucleic acid encoding invention modified ecdysone receptor. The invention method is useful in a wide variety of applications where inducible in vivo expression of an exogenous gene is desired, such as in vivo therapeutic methods for delivering recombinant proteins into a variety of cells within a patient.
IT 144087-95-6
RL: BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)
(modified ecdysone response element fragment; method for modulating expression of exogenous genes in mammalian systems using modified ecdysone receptors for gene therapy)
RN 144087-95-6 CAPLUS

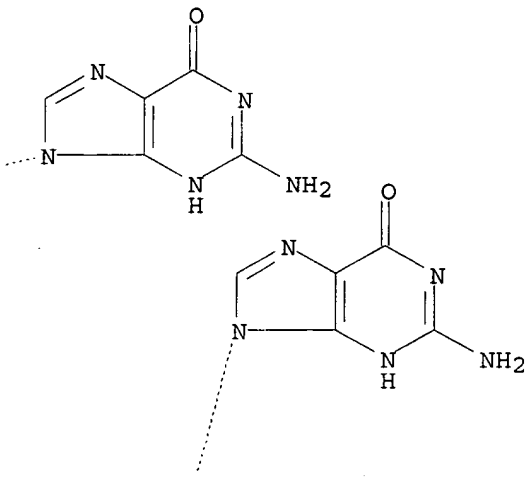
CN Adenosine, 2'-deoxyadenylyl-(3'→5')-2'-deoxyguanylyl-(3'→5')-2'-deoxyguanylyl-(3'→5')-thymidylyl-(3'→5')-2'-deoxycytidylyl-(3'→5')-2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

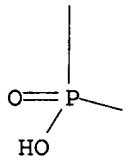
PAGE 1-A



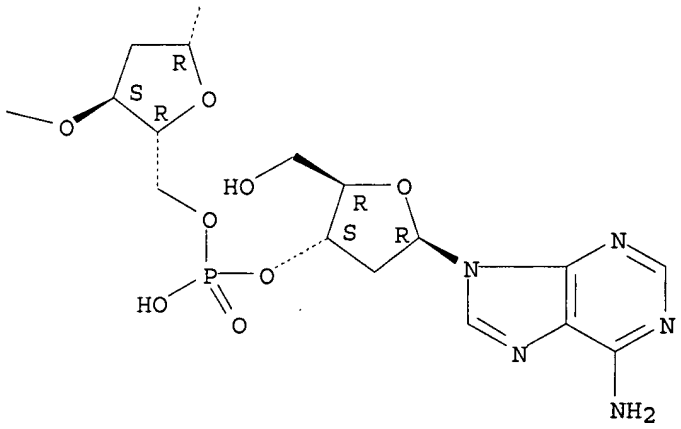
PAGE 1-B



PAGE 2-A



PAGE 2-B



RE.CNT 118 THERE ARE 118 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 9 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:556104 CAPLUS
DN 137:109489
TI Compositions comprising a polypeptide and an active agent
IN Piccariello, Thomas; Olon, Lawrence P.; Kirk, Randal J.
PA USA
SO U.S. Pat. Appl. Publ., 34 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 20

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | US 2002099013 | A1 | 20020725 | US 2001-933708 | 20010822 |
| | US 2004087483 | A1 | 20040506 | US 2002-136433 | 20020502 |
| | US 2004063628 | A1 | 20040401 | US 2002-156527 | 20020529 |
| | US 7060708 | B2 | 20060613 | | |
| | US 2006014697 | A1 | 20060119 | US 2005-89056 | 20050325 |
| PRAI | US 2000-247556P | P | 20001114 | | |
| | US 2000-247558P | P | 20001114 | | |
| | US 2000-247559P | P | 20001114 | | |
| | US 2000-247560P | P | 20001114 | | |
| | US 2000-247561P | P | 20001114 | | |
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| | US 2000-247595P | P | 20001114 | | |
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| | US 2000-247607P | P | 20001114 | | |
| | US 2000-247608P | P | 20001114 | | |
| | US 2000-247609P | P | 20001114 | | |
| | US 2000-247610P | P | 20001114 | | |
| | US 2000-247611P | P | 20001114 | | |
| | US 2000-247612P | P | 20001114 | | |

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| US 2000-247620P | P | 20001114 |
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| US 2000-247805P | P | 20001114 |
| US 2000-247807P | P | 20001114 |
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| US 2000-247927P | P | 20001114 |
| US 2000-247928P | P | 20001114 |
| US 2000-247929P | P | 20001114 |
| US 2000-247930P | P | 20001114 |
| US 1999-265415 | B2 | 19990310 |
| US 1999-411238 | B2 | 19991004 |
| WO 2000-US5693 | A | 20000306 |
| US 2000-642820 | A2 | 20000822 |
| US 2000-248607P | P | 20001116 |
| US 2000-248620P | P | 20001116 |
| US 2000-248656P | P | 20001116 |
| US 2000-248658P | P | 20001116 |
| US 2000-248659P | P | 20001116 |
| US 2000-248660P | P | 20001116 |
| US 2000-248662P | P | 20001116 |
| US 2000-248663P | P | 20001116 |
| US 2000-248685P | P | 20001116 |
| US 2000-248737P | P | 20001116 |
| US 2000-248738P | P | 20001116 |
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| US 2000-248772P | P | 20001116 |
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| US 2000-248777P | P | 20001116 |
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| US 2000-248779P | P | 20001116 |
| US 2000-248782P | P | 20001116 |
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| US 2000-248796P | P | 20001116 |
| US 2000-248797P | P | 20001116 |
| US 2001-933708 | A2 | 20010822 |
| US 2001-986426 | A2 | 20011108 |
| US 2001-987458 | B2 | 20011114 |
| WO 2001-US43089 | B2 | 20011114 |
| US 2001-988034 | B2 | 20011116 |

| | | | |
|---|---|---|---|
| | US 2001-988071 | B2 | 20011116 |
| | WO 2001-US43115 | B2 | 20011116 |
| | WO 2001-US43117 | B2 | 20011116 |
| | US 2002-358368P | P | 20020222 |
| | US 2002-358381P | P | 20020222 |
| | US 2002-362082P | P | 20020307 |
| | US 2002-366258P | P | 20020322 |
| | US 2002-156527 | A2 | 20020529 |
| | WO 2003-US5525 | A2 | 20030224 |
| | US 2003-507012P | P | 20030930 |
| | US 2004-567800P | P | 20040505 |
| | US 2004-567802P | P | 20040505 |
| | US 2004-568011P | P | 20040505 |
| | US 2004-923088 | A2 | 20040823 |
| | US 2004-923257 | A2 | 20040823 |
| | US 2004-953110 | A2 | 20040930 |
| | US 2004-953111 | A2 | 20040930 |
| | US 2004-953116 | A2 | 20040930 |
| | US 2004-953119 | A2 | 20040930 |
| | US 2004-955006 | A2 | 20040930 |
| | WO 2004-US32131 | A2 | 20040930 |

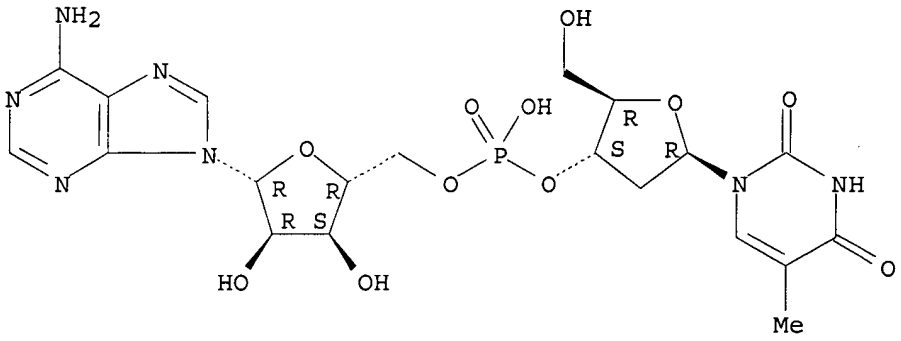
AB Claimed are compns. comprising a polypeptide and an active agent covalently attached to the polypeptide and a method for delivery of an active agent to a patient by administering the composition to the patient. The peptide is a homopolymer of a naturally occurring amino acid or a heteropolymer of two or more naturally occurring amino acids. In an example, (Glu)n-cephalexin was prepared from Glu(OBut)NCA and cephalexin hydrochloride.

IT 21062-37-3D, analogs
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(compns. comprising a polypeptide and an active agent)

RN 21062-37-3 CAPLUS

CN Adenosine, thymidylyl-(3'→5')- (7CI, 8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.




L8 ANSWER 10 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2002:332011 CAPLUS

DN 136:355482

TI Compositions comprising a polypeptide and an active agent

IN Piccariello, Thomas; Olon, Lawrence P.; Kirk, Randall J.

PA New River Pharmaceuticals, Inc., USA

SO PCT Int. Appl., 98 pp.
CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 20

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|

PI WO 2002034237 A1 20020502 WO 2001-US26142 20010822
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
US 6716452 B1 20040406 US 2000-642820 20000822
CA 2420590 AA 20020502 CA 2001-2420590 20010822
AU 2001086599 A5 20020506 AU 2001-86599 20010822
EP 1311242 A1 20030521 EP 2001-966056 20010822
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
JP 2004523480 T2 20040805 JP 2002-537291 20010822
US 2004127397 A1 20040701 US 2003-727565 20031205
PRAI US 2000-642820 A 20000822
US 2000-247613P P 20001114
US 2000-247614P P 20001114
US 2000-247615P P 20001114
US 2000-247616P P 20001114
US 2000-247617P P 20001114
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US 2000-247801P P 20001114
US 2000-247802P P 20001114
US 2000-247803P P 20001114
US 2000-247804P P 20001114
WO 2001-US26142 W 20010822

AB Claimed are compns. comprising a polypeptide and an active agent covalently attached to the polypeptide and a method for delivery of an active agent to a patient by administering the composition to the patient. The peptide is a homopolymer of a naturally occurring amino acid

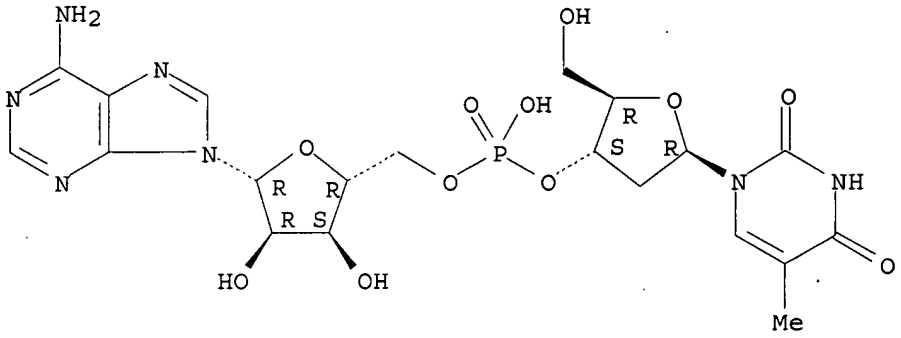
or a heteropolymer of two or more naturally occurring amino acids. In an example, (Glu)n-cephalexin was prepared from Glu(OBut)NCA and cephalexin hydrochloride.

IT 21062-37-3D, analogs
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(compns. comprising a polypeptide and an active agent)

RN 21062-37-3 CAPLUS

CN Adenosine, thymidylyl-(3'→5')- (7CI, 8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 11 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2001:710918 CAPLUS

DN 136:86028

TI Synthesis of selenium-derivatized nucleosides and oligonucleotides for X-ray crystallography

AU Carrasco, Nicolas; Ginsburg, Dov; Du, Quan; Huang, Zhen

CS Department of Chemistry, Brooklyn College, The Graduate School of The City University of New York, Brooklyn, NY, 11210, USA

SO Nucleosides, Nucleotides & Nucleic Acids (2001), 20(9), 1723-1734
CODEN: NNNAFY; ISSN: 1525-7770

PB Marcel Dekker, Inc.

DT Journal

LA English

OS CASREACT 136:86028

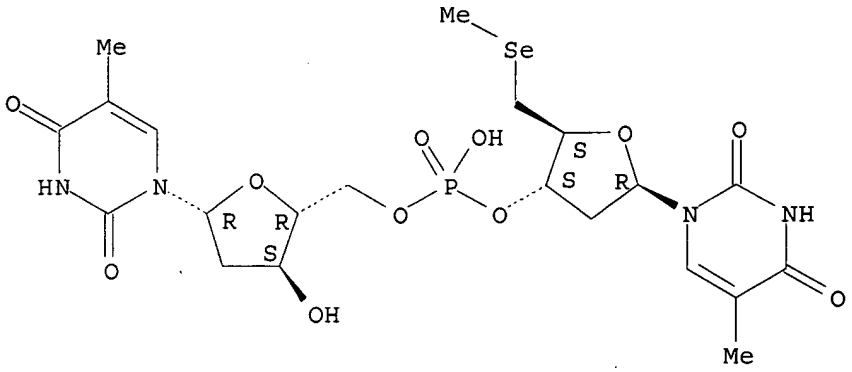
AB We report here the synthesis of nucleoside and oligonucleotide analogs containing selenium, which serves as an anomalous scattering center to enable MAD phase determination in nucleotide X-ray crystallog. We have developed a phase transfer approach to introduce the selenium functionality in A, C, G, T, and U nucleosides at 5'-positions. In the incorporation of the selenium functionality, the leaving groups (bromide, mesyl, and tosyl) were readily displaced by sodium selenide, sodium diselenide, and sodium Me selenide with yields higher than 90%. Selenium-derivatized oligonucleotides have been synthesized via phosphoramidite chemical

IT 386230-42-8
RL: PRP (Properties)
(preparation of selenium-derivatized nucleosides and oligonucleotides for X-ray crystallog using phase-transfer catalysis)

RN 386230-42-8 CAPLUS

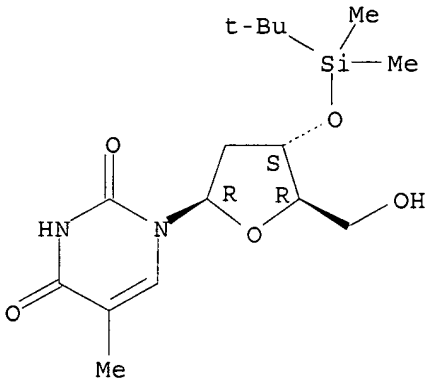
CN Thymidine, 5'-Se-methyl-5'-selenothymidylyl-(3'→5')- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



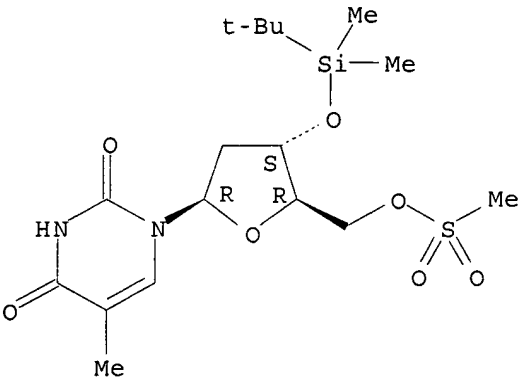
IT 40733-27-5 171563-32-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of selenium-derivatized nucleosides and oligonucleotides for X-ray crystallog using phase-transfer catalysis)
RN 40733-27-5 CAPLUS
CN Thymidine, 3'-O-[(1,1-dimethylethyl)dimethylsilyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 171563-32-9 CAPLUS
CN Thymidine, 3'-O-[(1,1-dimethylethyl)dimethylsilyl]-, 5'-methanesulfonate (9CI) (CA INDEX NAME)

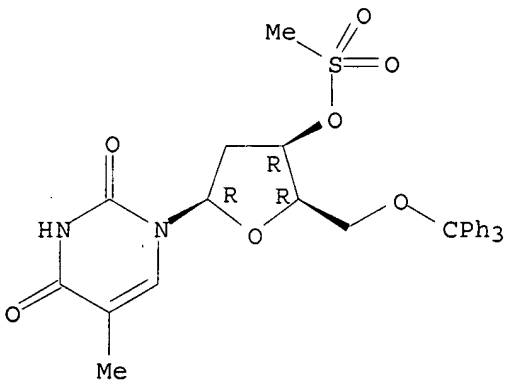
Absolute stereochemistry.



RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

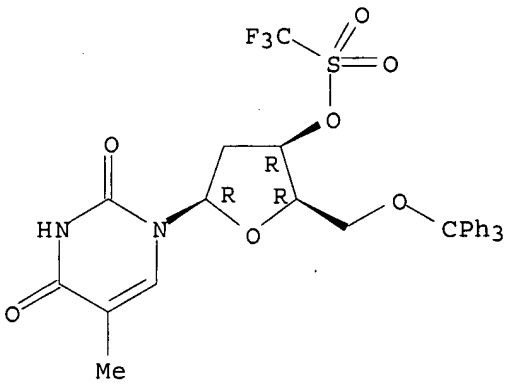
L8 ANSWER 12 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1999:83396 CAPLUS
DN 130:196905
TI Synthetic methods. 49. New nucleoside heteroanalogs: desoxynucleoside selenocyanates
AU Belostotskii, Anatoly M.; Lexner, Jael; Hassner, Alfred
CS Chemistry Department, Bar-Ilan University, Ramat-Gan, 52900, Israel
SO Tetrahedron Letters (1999), 40(6), 1181-1184
CODEN: TELEAY; ISSN: 0040-4039
PB Elsevier Science Ltd.
DT Journal
LA English
AB New nucleoside heteroanalogs, 5'- and 3'-desoxynucleoside selenocyanates and primary desoxysugar selenocyanates, were synthesized from activated nucleoside and sugar derivs. and a new convenient seleno nucleophile, tetrabutylammonium selenocyanate. Tresylate-based activation of hydroxy functions turned out to be most successful for formation of these selenocyanates compared with mesylate- or triflate-based activation.
IT 104218-44-2 118466-32-3 220792-04-1
220792-06-3 220792-10-9 220792-20-1
220792-23-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(new nucleoside heteroanalogs, desoxynucleoside selenocyanates)
RN 104218-44-2 CAPLUS
CN 2,4(1H,3H)-Pyrimidinedione, 1-[2-deoxy-3-O-(methylsulfonyl)-5-O-(triphenylmethyl)-β-D-threo-pentofuranosyl]-5-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



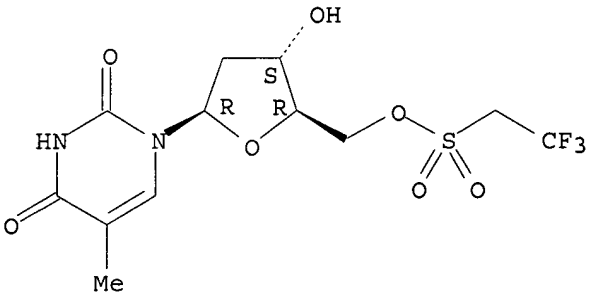

RN 118466-32-3 CAPLUS
CN 2,4(1H,3H)-Pyrimidinedione, 1-[2-deoxy-3-O-[(trifluoromethyl)sulfonyl]-5-O-(triphenylmethyl)-β-D-threo-pentofuranosyl]-5-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



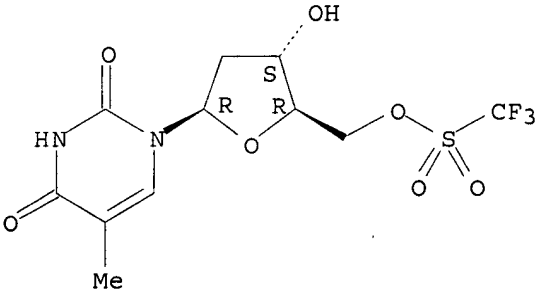
RN 220792-04-1 CAPLUS
CN Thymidine, 5'-(2,2,2-trifluoroethanesulfonate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



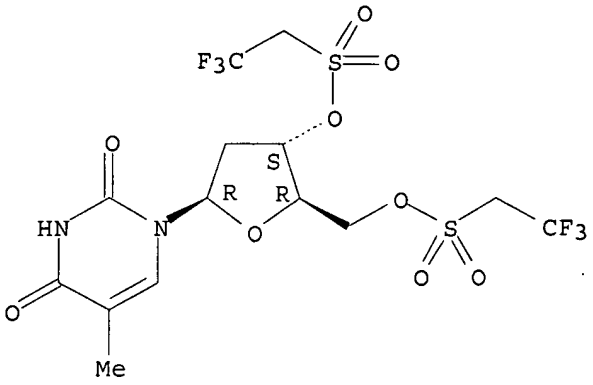
RN 220792-06-3 CAPLUS
CN Thymidine, 5'-(trifluoromethanesulfonate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



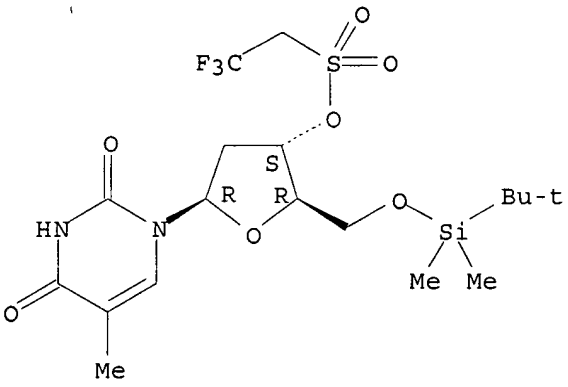
RN 220792-10-9 CAPLUS
CN Thymidine, 3',5'-bis(2,2,2-trifluoroethanesulfonate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



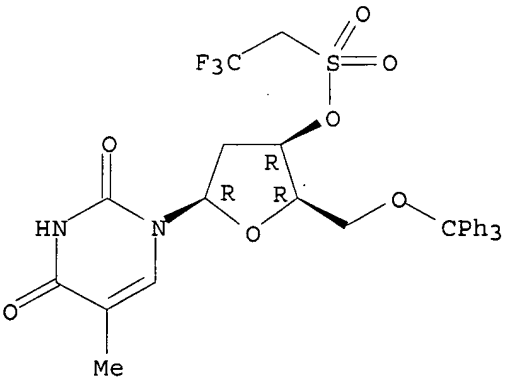
RN 220792-20-1 CAPLUS
CN Thymidine, 5'-O-[(1,1-dimethylethyl)dimethylsilyl]-, 3'-(2,2,2-trifluoroethanesulfonate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 220792-23-4 CAPLUS
CN 2,4(1H,3H)-Pyrimidinedione, 1-[2-deoxy-3-O-[(2,2,2-trifluoroethyl)sulfonyl]-5-O-(triphenylmethyl)-β-D-threo-pentofuranosyl]-5-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

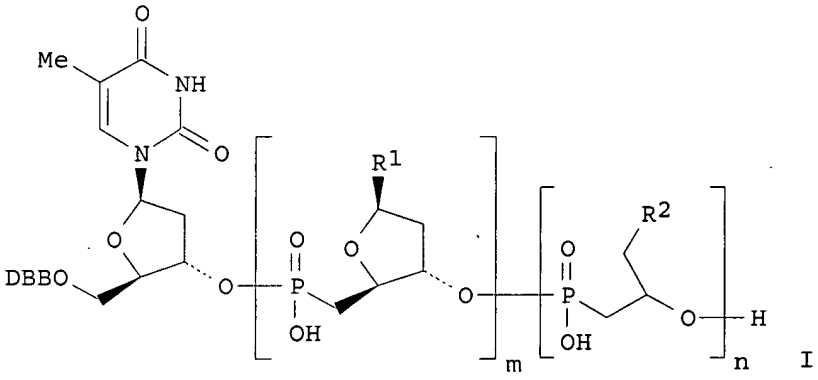


RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 13 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1996:646337 CAPLUS
DN 125:301492
TI Preparation of glyceryl-oligonucleotide having anti-HIV activity and improved serum stability
IN Hotoda, Hitoshi; Koizumi, Makoto; Oomine, Hisanori; Furukawa, Hidehiko; Nishigaki, Takashi; Abe, Yasushi; Kaneko, Masakatsu
PA Sankyo Co, Japan
SO Jpn. Kokai Tokkyo Koho, 16 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI JP 08208687 | A2 | 19960813 | JP 1995-301020 | 19951120 |
| PRAI JP 1995-301020 | A | 19951120 | | |
| JP 1994-291207 | | 19941125 | | |

OS MARPAT 125:301492
GI




I

AB The title compds. [I; DBB = 3,4-di(benzyloxy)benzyl; R1 = guanine-9-yl, adenin-9-yl; R2 = adenin-9-yl, guanine-9-yl, cytosin-1-yl, uracil-1-yl; m = 0-6; n = 1-6; provided that m + n = 2-10] are prepared In these oligonucleotides, the substitution of deoxyribose with glycerol improves serum stability against nuclease. Thus, oligonucleotide I (R1 = R2 = guanine-9-yl, m = 6, n = 1) (II) was prepared by the phosphoramidite solid phase method using a controlled pore glass (CPG)-bound glycerylguanine derivative (preparation given) and 5'-O-[3,4-di(benzyloxy)benzyl]thymidine 3'-O-(2-cyanoethyl N,N-diisopropylphosphoramidite). II and I (R1 - R2 = guanine-9-yl, m = 4, n = 2) showed IC50 of 5.3 and 1.0 μg/mL, resp., for inhibiting the cell damage of MT-4 cells infected with HIV-1. Pharmaceutical formulations, e.g. hard capsule containing II, were prepared

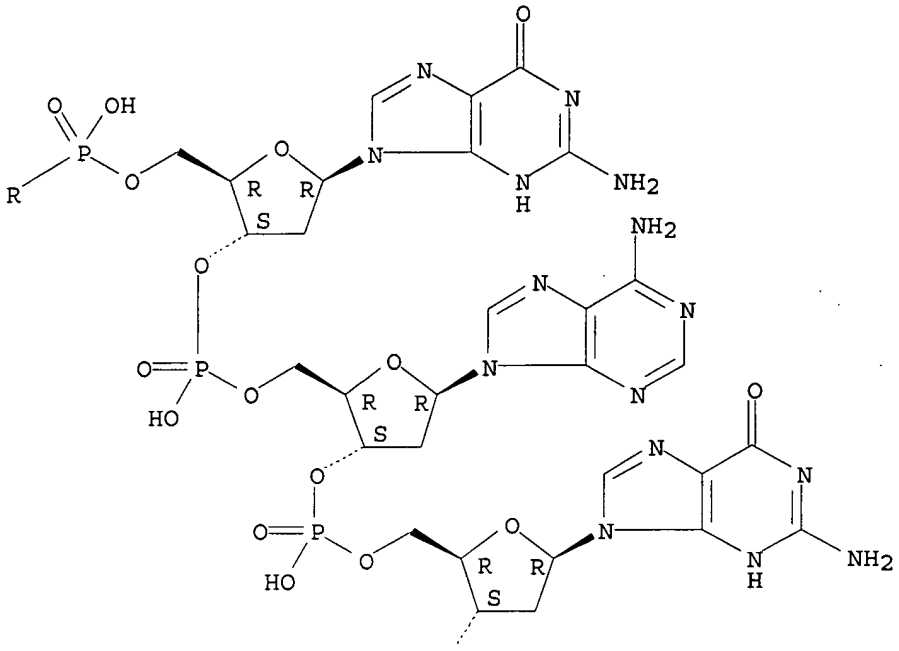
IT 182625-60-1P 182625-62-3P 182625-63-4P
182625-64-5P 182625-65-6P 182625-66-7P
182823-35-4P 182823-36-5P 182823-37-6P
182823-39-8P 182823-41-2P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of glyceryl-oligonucleotide as HIV inhibitors with improved serum stability against nuclease)

RN 182625-60-1 CAPLUS
CN Guanosine, 5'-O-[[3,4-bis(phenylmethoxy)phenyl]methyl]thymidylyl-(3'→5')-2'-deoxyguanylyl-(3'→5')-2'-deoxyguanylyl-

(3'→5')-2'-deoxyguanylyl-(3'→5')-2'-deoxyadenylyl-
(3'→5')-2'-deoxyguanylyl-(3'→3')-9-(1-deoxy-D-glycerol-1-yl)-
9-de-β-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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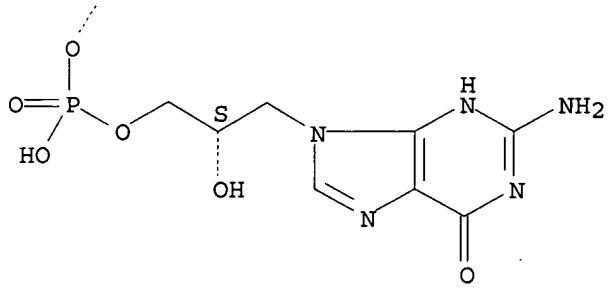

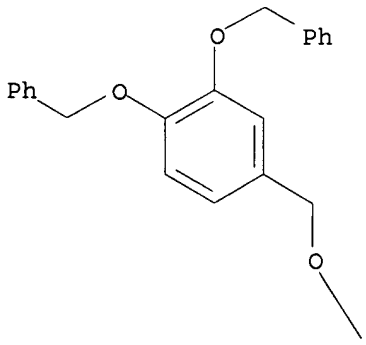

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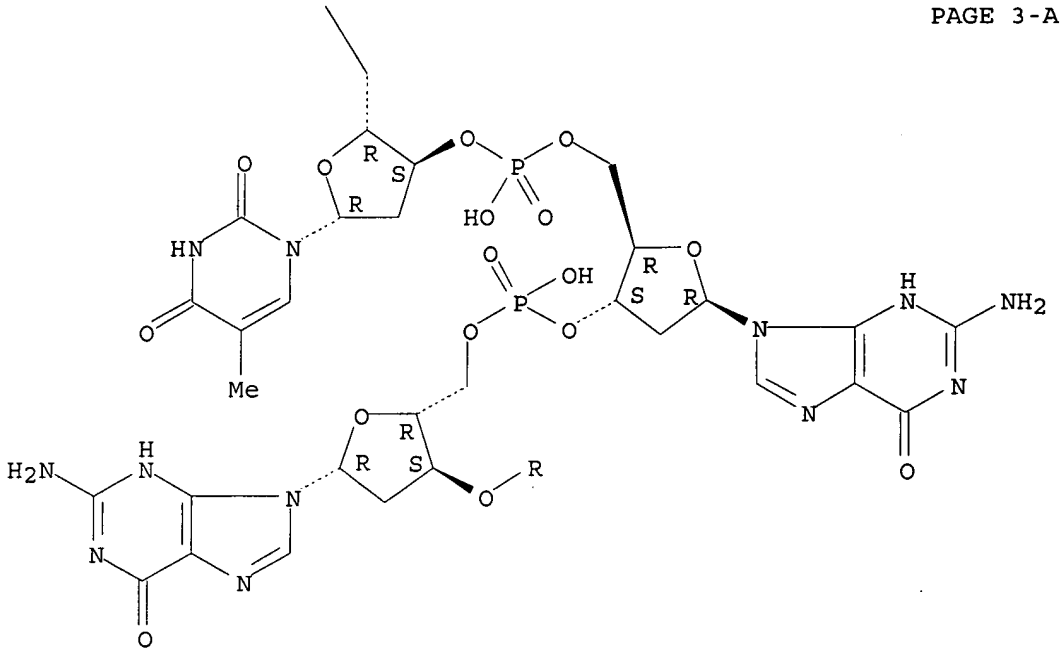
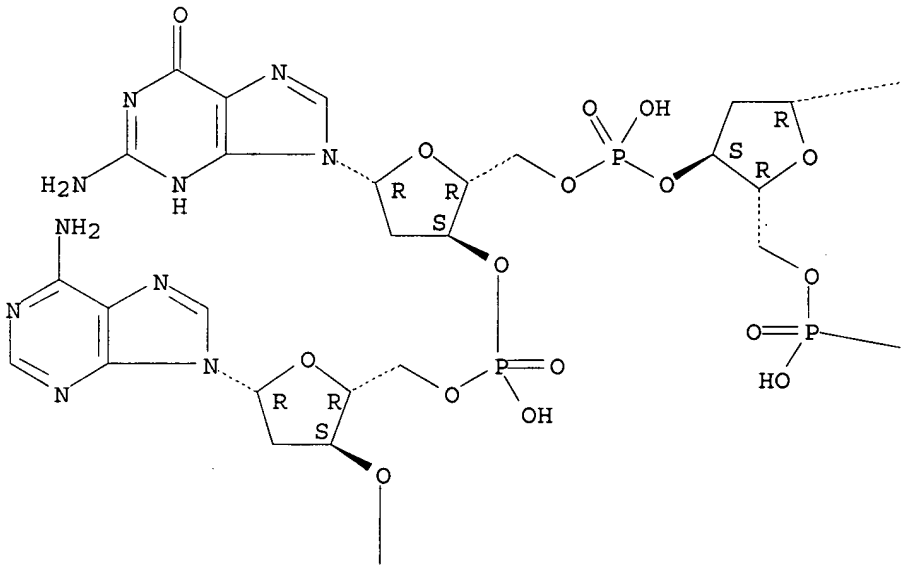


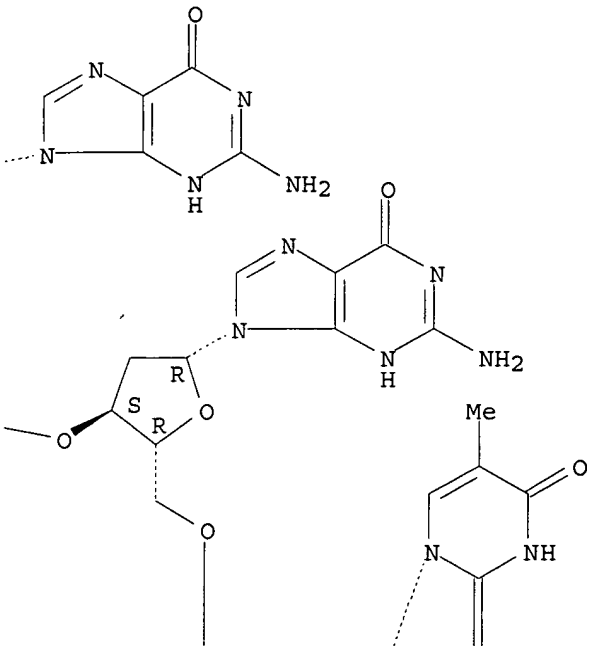
RN 182625-62-3 CAPLUS
CN Guanosine, 5'-O-[[3,4-bis(phenylmethoxy)phenyl]methyl]thymidylyl-(3'→5')-2'-deoxyguanylyl-(3'→5')-2'-deoxyguanylyl-(3'→5')-2'-deoxyguanylyl-(3'→5')-2'-deoxyadenylyl-(3'→3')-9-(1-deoxy-D-glycerol-1-yl)-9-de-β-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



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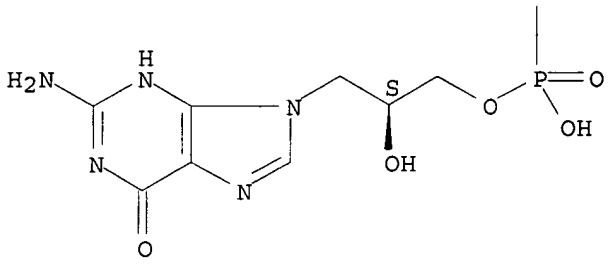

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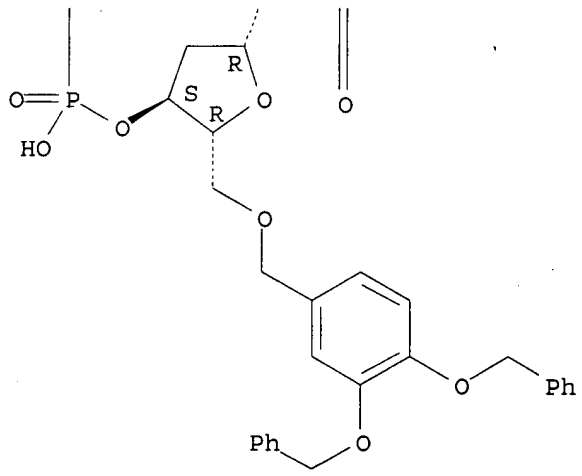
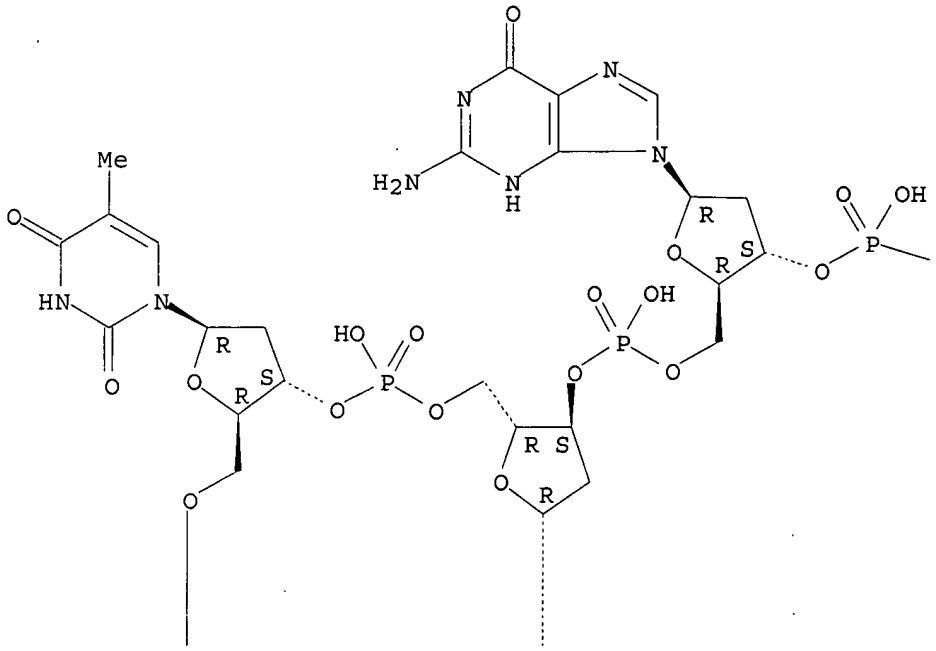


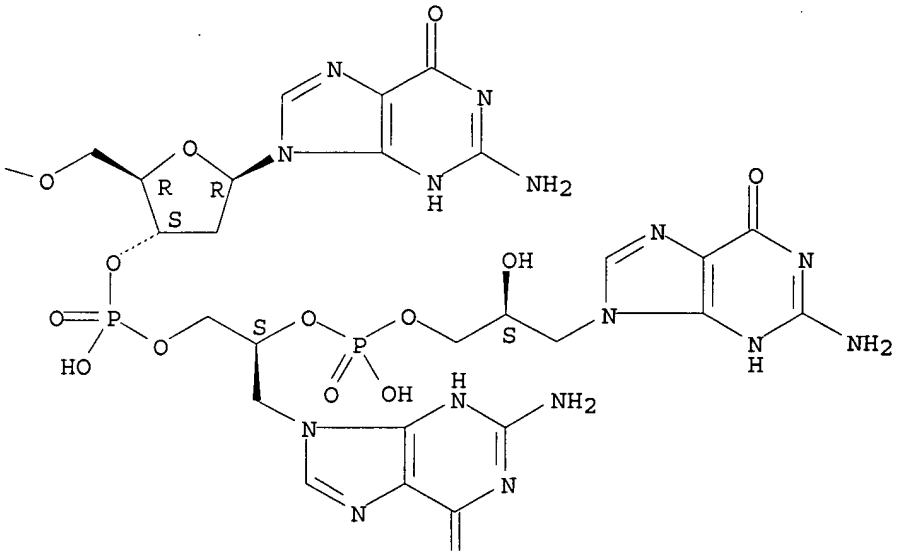
RN 182625-63-4 CAPLUS
CN Guanosine, 5'-O-[[3,4-bis(phenylmethoxy)phenyl]methyl]thymidylyl-(3'→5')-2'-deoxyguanylyl-(3'→5')-2'-deoxyguanylyl-(3'→5')-2'-deoxyguanylyl-(3'→3')-9-(1-deoxy-D-glycerol-1-yl)-9-de-β-D-ribofuranosylguanylyl-(2'→3')-9-(1-deoxy-D-glycerol-1-yl)-9-de-β-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



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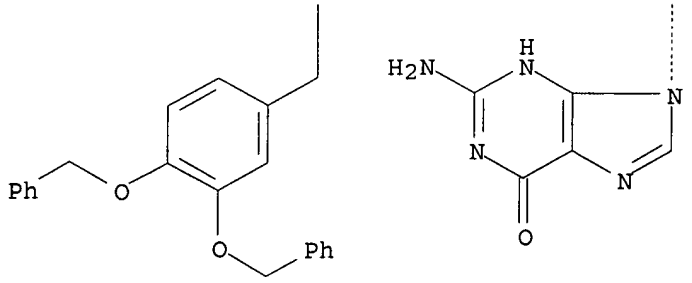
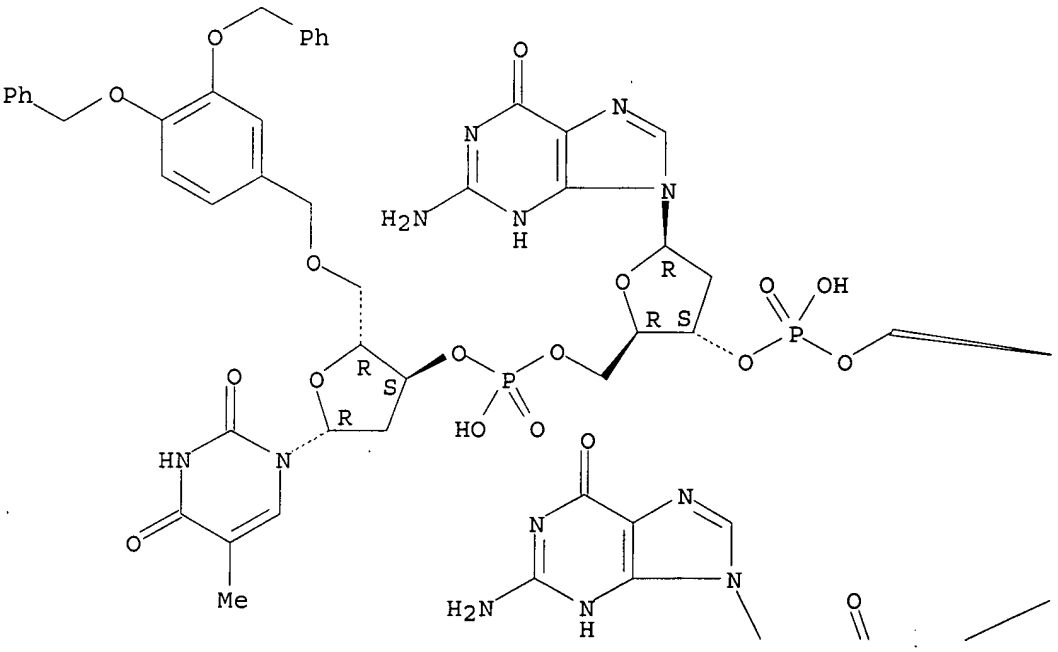


PAGE 2-B

RN 182625-64-5 CAPLUS
CN Guanosine, 5'-O-[[3,4-bis(phenylmethoxy)phenyl]methyl]thymidylyl-(3'→5')-2'-deoxyguanylyl-(3'→5')-2'-deoxyguanylyl-(3'→3')-9-(1-deoxy-D-glycerol-1-yl)-9-de-β-D-ribofuranosylguanylyl-(2'→3')-9-(1-deoxy-D-glycerol-1-yl)-9-de-β-D-ribofuranosylguanylyl-(2'→3')-9-(1-deoxy-D-glycerol-1-yl)-9-de-β-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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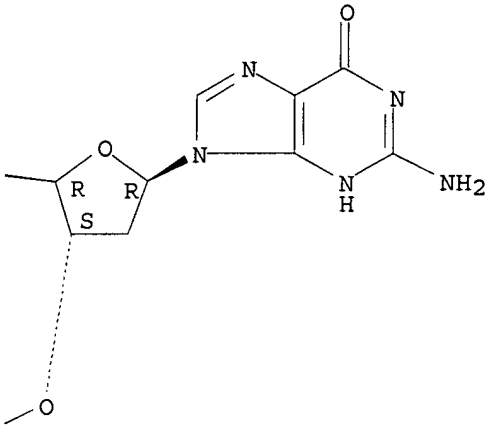

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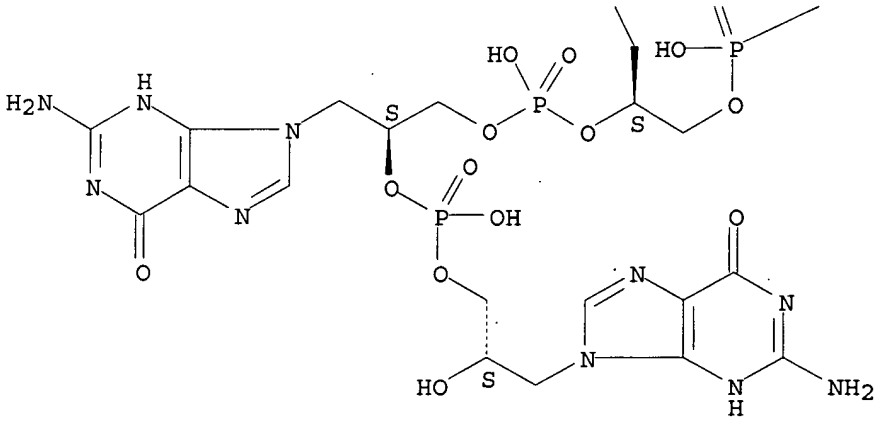
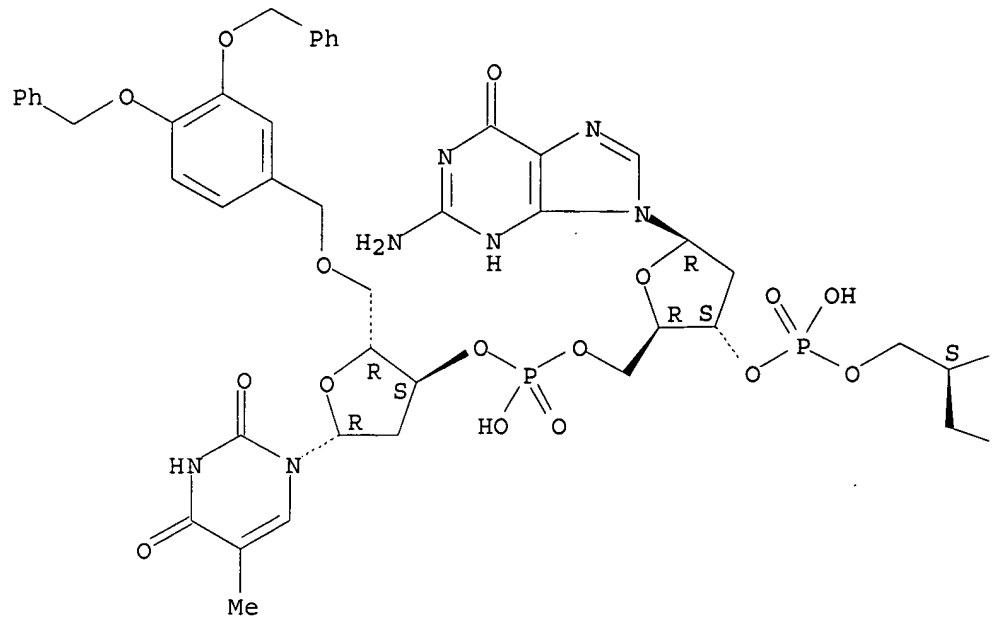


RN 182625-65-6 CAPLUS
CN Guanosine, 5'-O-[[3,4-bis(phenylmethoxy)phenyl]methyl]thymidylyl-(3'→5')-2'-deoxyguanylyl-(3'→3')-9-(1-deoxy-D-glycerol-1-yl)-9-de-β-D-ribofuranosylguanylyl-(2'→3')-9-(1-deoxy-D-glycerol-1-yl)-9-de-β-D-ribofuranosylguanylyl-(2'→3')-9-(1-deoxy-D-glycerol-1-yl)-9-de-β-D-ribofuranosylguanylyl-(2'→3')-9-(1-deoxy-D-glycerol-1-yl)-9-de-β-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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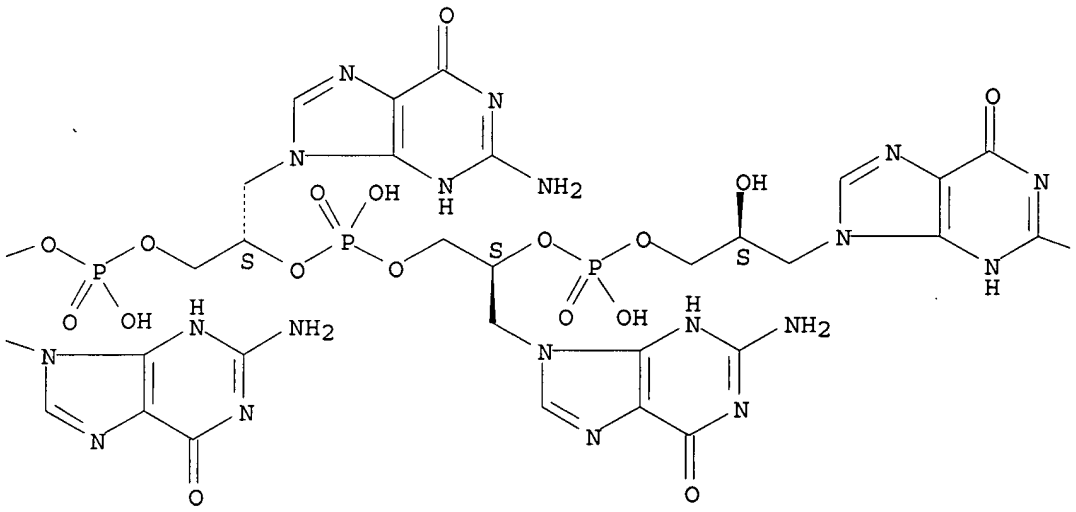
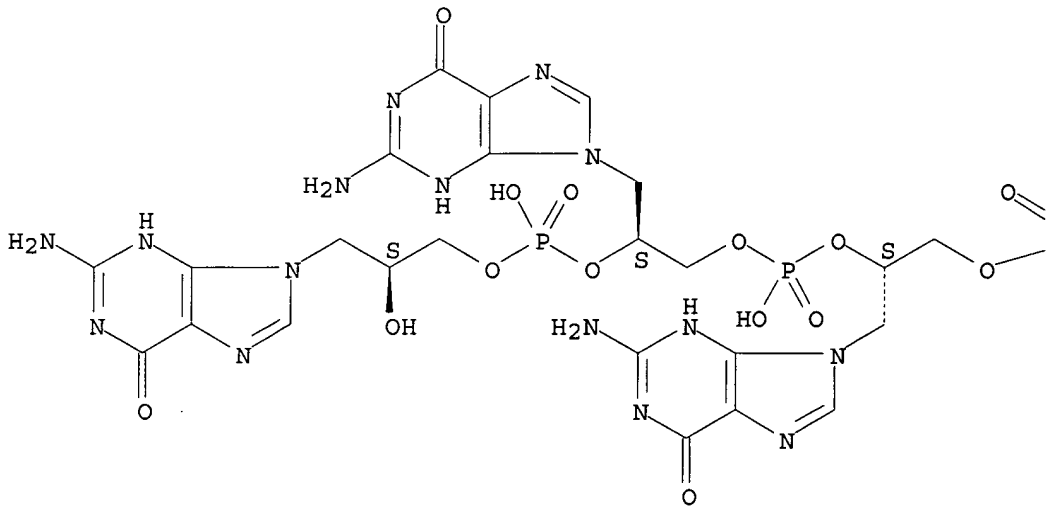


RN 182625-66-7 CAPLUS
CN Guanosine, 5'-O-[[3,4-bis(phenylmethoxy)phenyl]methyl]thymidylyl-(3'→3')-9-(1-deoxy-D-glycerol-1-yl)-9-de-β-D-ribofuranosylguanylyl-(2'→3')-9-(1-deoxy-D-glycerol-1-yl)-9-de-β-D-ribofuranosylguanylyl-(2'→3')-9-(1-deoxy-D-glycerol-1-yl)-9-de-β-D-ribofuranosylguanylyl-(2'→3')-9-(1-deoxy-D-glycerol-1-yl)-9-de-β-D-ribofuranosylguanylyl-(2'→3')-9-(1-deoxy-D-glycerol-1-yl)-9-de-β-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.





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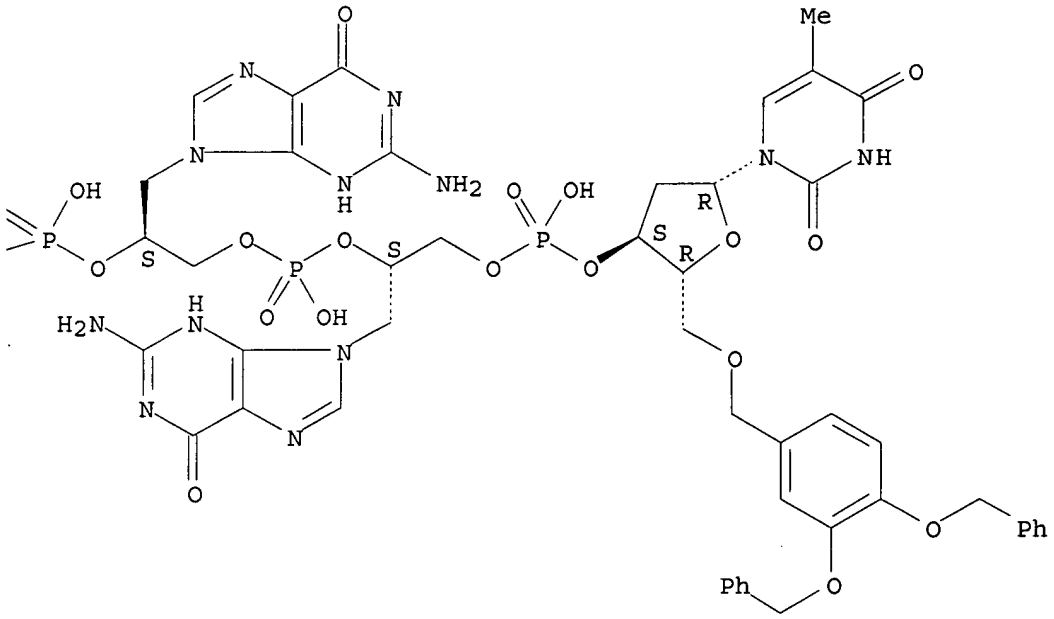
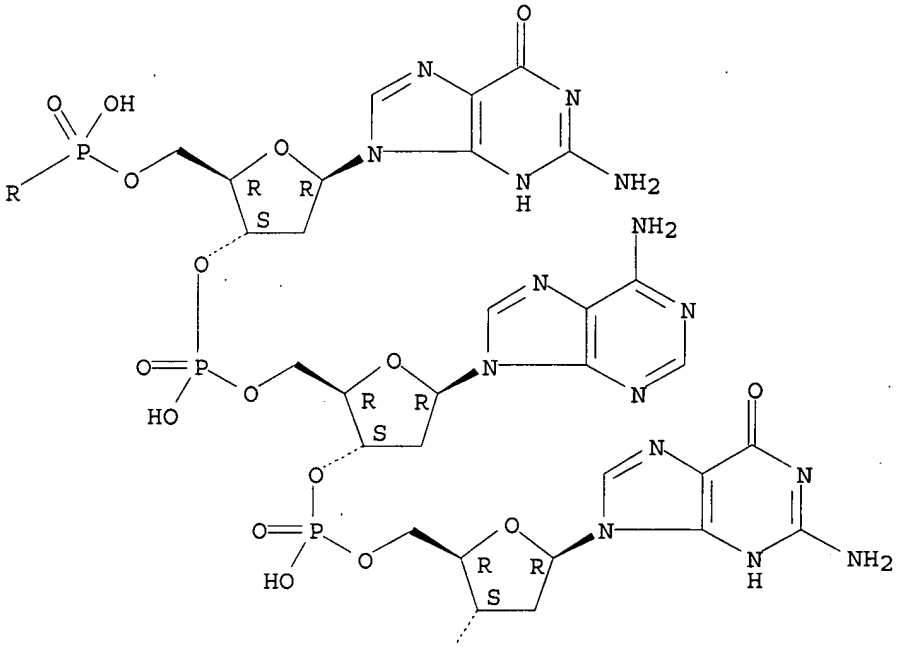


RN 182823-35-4 CAPLUS
CN Guanosine, 5'-O-[[3,4-bis(phenylmethoxy)phenyl]methyl]thymidylyl-(3'→5')-2'-deoxyguanylyl-(3'→5')-2'-deoxyguanylyl-(3'→5')-2'-deoxyguanylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')-2'-deoxyguanylyl-(3'→3')-9-(1-deoxy-L-glycerol-1-yl)-9-de-β-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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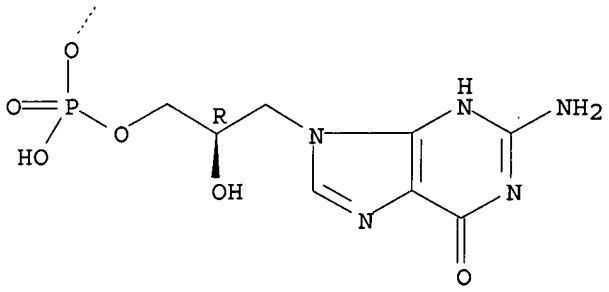
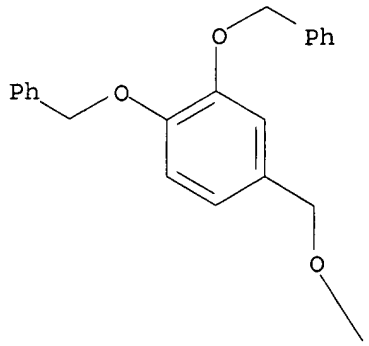
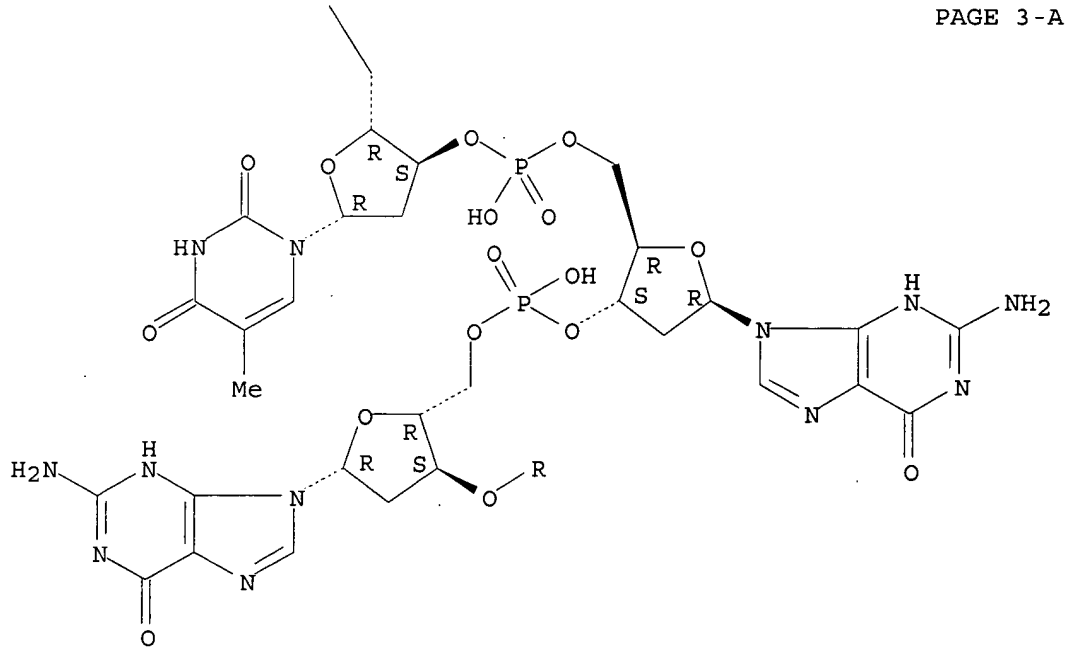


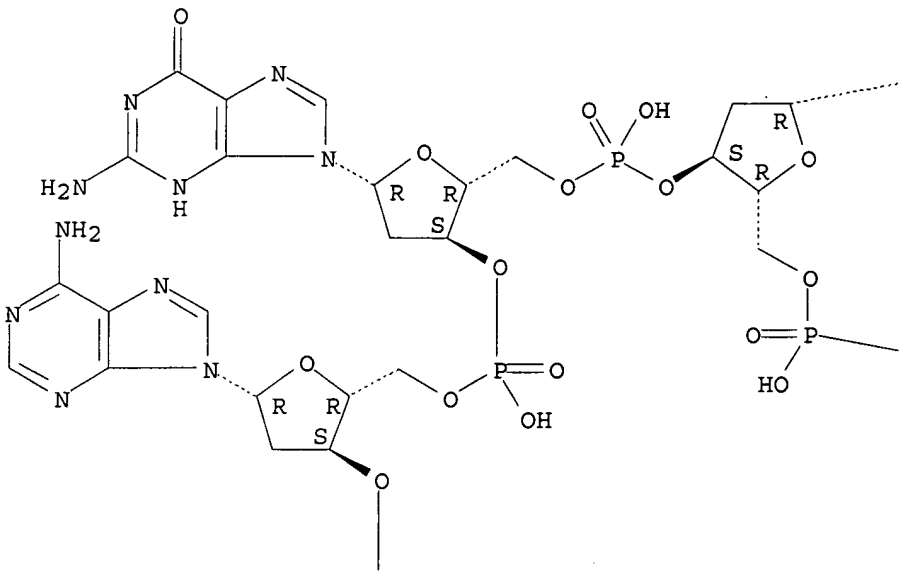


PAGE 3-A

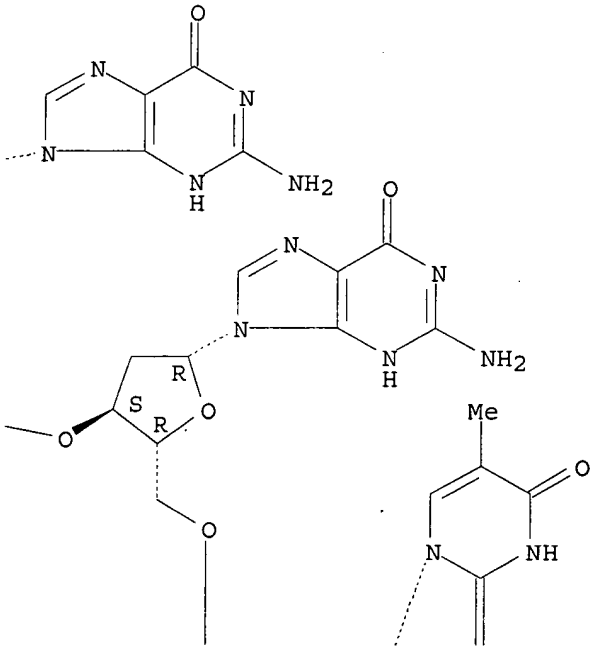


RN 182823-36-5 CAPLUS
CN Guanosine, 5'-O-[[3,4-bis(phenylmethoxy)phenyl]methyl]thymidylyl-(3'→5')-2'-deoxyguanylyl-(3'→5')-2'-deoxyguanylyl-(3'→5')-2'-deoxyadenylyl-(3'→3')-9-(1-deoxy-L-glycerol-1-yl)-9-de-β-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.







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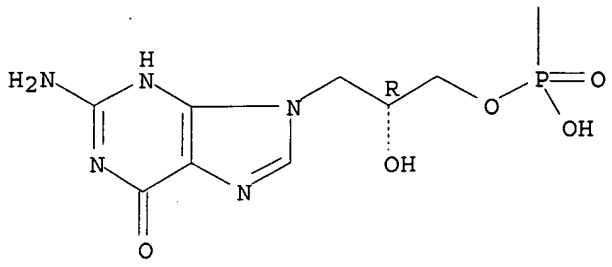

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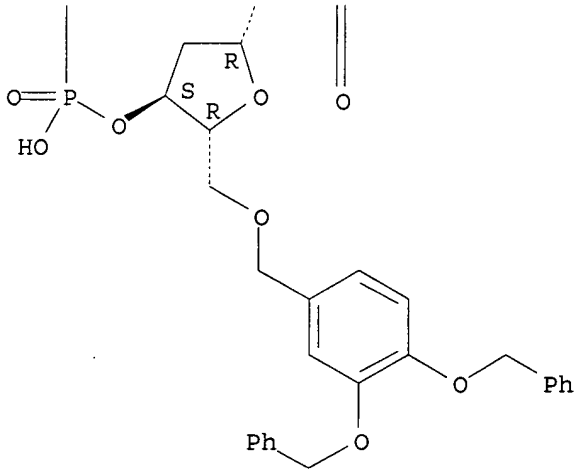
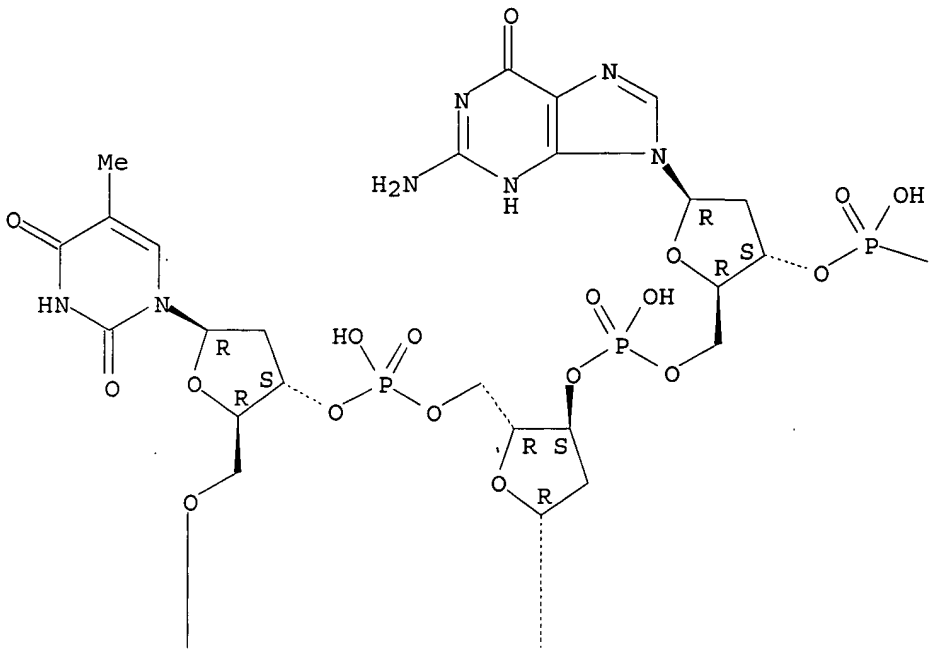


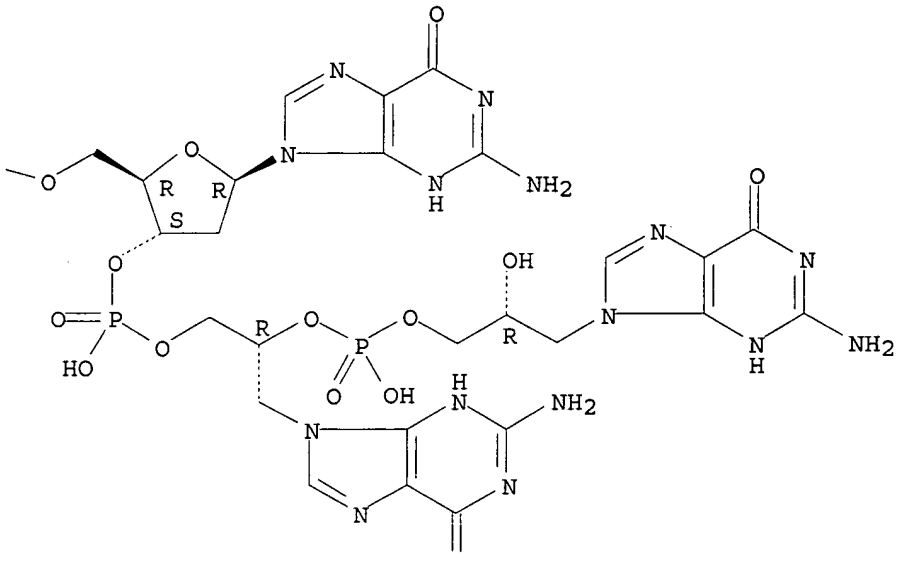
RN 182823-37-6 CAPLUS
CN Guanosine, 5'-O-[[3,4-bis(phenylmethoxy)phenyl]methyl]thymidylyl-(3'→5')-2'-deoxyguanylyl-(3'→5')-2'-deoxyguanylyl-(3'→5')-2'-deoxyguanylyl-(3'→3')-9-(1-deoxy-L-glycerol-1-yl)-9-de-β-D-ribofuranosylguanylyl-(2'→3')-9-(1-deoxy-L-glycerol-1-yl)-9-de-β-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

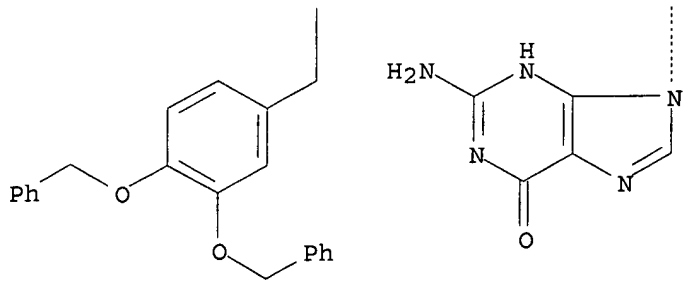
PAGE 1-A



PAGE 1-B



PAGE 2-A

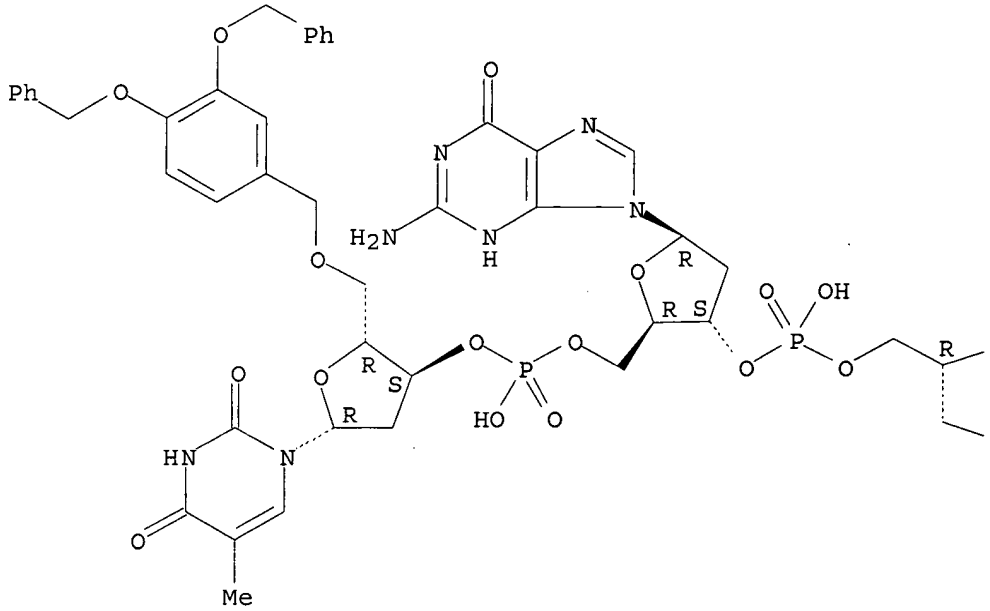


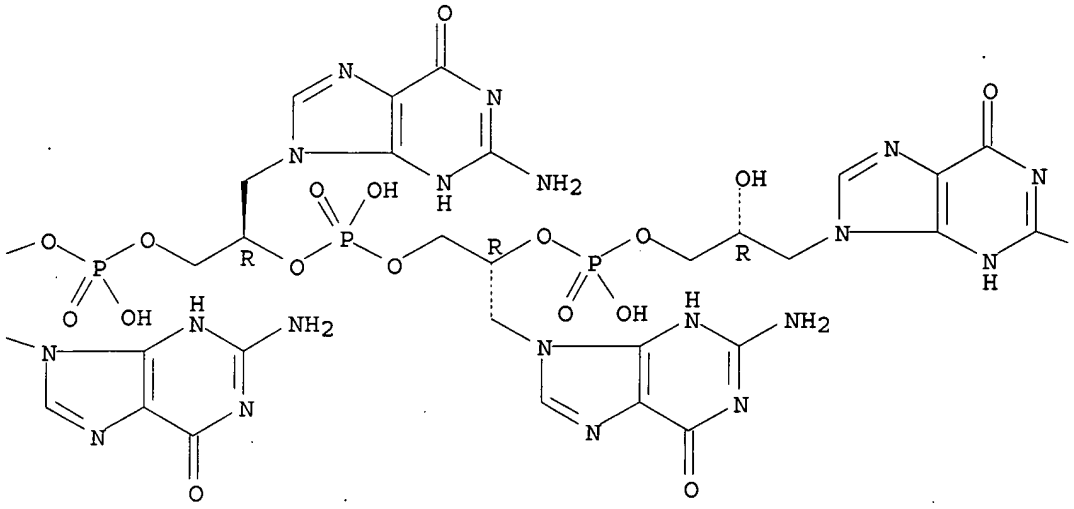
PAGE 2-B

RN 182823-39-8 CAPLUS
CN Guanosine, 5'-O-[[3,4-bis(phenylmethoxy)phenyl]methyl]thymidylyl-(3'→5')-2'-deoxyguanylyl-(3'→3')-9-(1-deoxy-L-glycerol-1-yl)-9-de-β-D-ribofuranosylguanylyl-(2'→3')-9-(1-deoxy-L-glycerol-1-yl)-9-de-β-D-ribofuranosylguanylyl-(2'→3')-9-(1-deoxy-L-glycerol-1-yl)-9-de-β-D-ribofuranosylguanylyl-(2'→3')-9-(1-deoxy-L-glycerol-1-yl)-9-de-β-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A





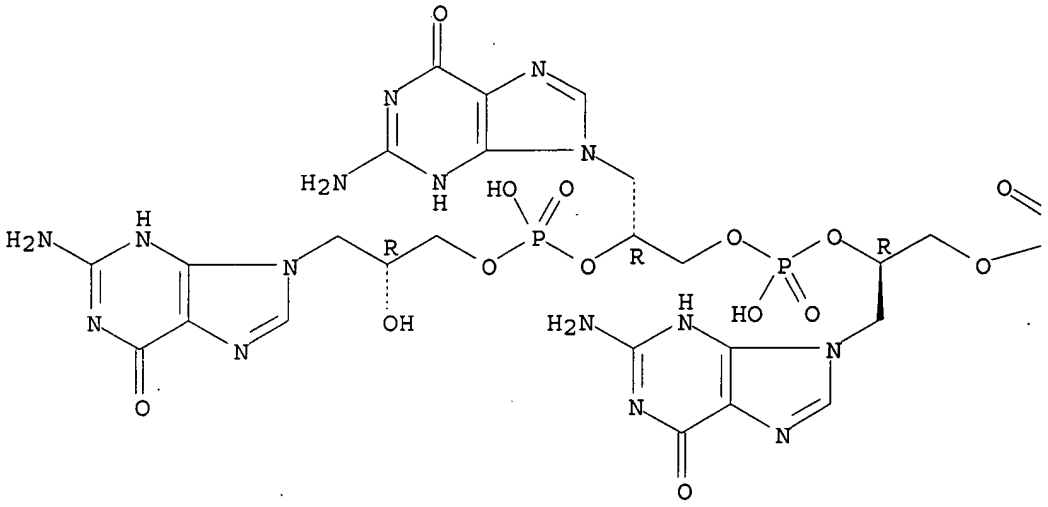


RN 182823-41-2 CAPLUS

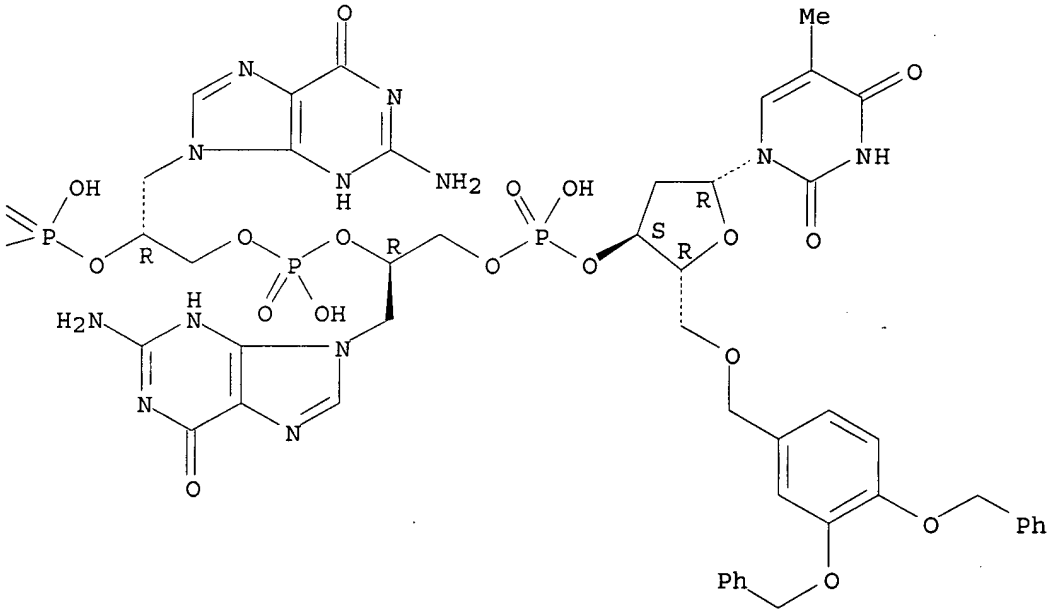
CN Guanosine, 5'-O-[[3,4-bis(phenylmethoxy)phenyl]methyl]thymidylyl-(3'→3')-9-(1-deoxy-L-glycerol-1-yl)-9-de-β-D-ribofuranosylguanylyl-(2'→3')-9-(1-deoxy-L-glycerol-1-yl)-9-de-β-D-ribofuranosylguanylyl-(2'→3')-9-(1-deoxy-L-glycerol-1-yl)-9-de-β-D-ribofuranosylguanylyl-(2'→3')-9-(1-deoxy-L-glycerol-1-yl)-9-de-β-D-ribofuranosylguanylyl-(2'→3')-9-(1-deoxy-L-glycerol-1-yl)-9-de-β-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

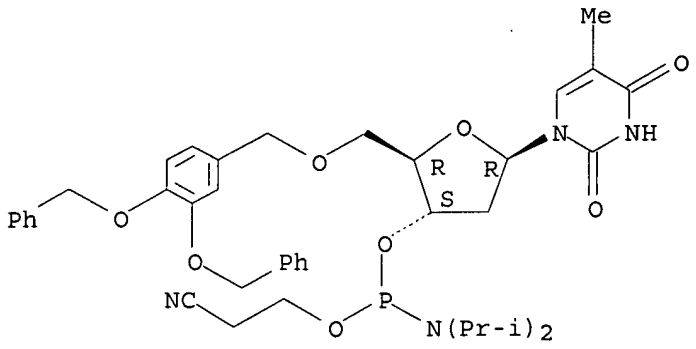


IT 167147-31-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of glyceryl-oligonucleotide as HIV inhibitors with improved serum stability against nuclease)

RN 167147-31-1 CAPLUS

CN Thymidine, 5'-O-[[3,4-bis(phenylmethoxy)phenyl]methyl]-, 3'-[2-cyanoethyl bis(1-methylethyl)phosphoramidite] (9CI) (CA INDEX NAME)

Absolute stereochemistry.




L8 ANSWER 14 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1996:161144 CAPLUS
DN 124:202962
TI Method for synthesis of oligonucleotide analogs containing formacetal or thioformacetal internucleotide linkages
IN Matteucci, Mark D.; Zhang, Jiancun
PA Gilead Sciences, Inc., USA
SO PCT Int. Appl., 96 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | WO 9529930 | A2 | 19951109 | WO 1995-US5269 | 19950425 |
| | WO 9529930 | A3 | 19960502 | | |
| | W: CA, JP | | | | |
| | RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE | | | | |
| | US 5646269 | A | 19970708 | US 1994-234452 | 19940428 |
| PRAI | US 1994-234452 | A | 19940428 | | |

OS CASREACT 124:202962; MARPAT 124:202962
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

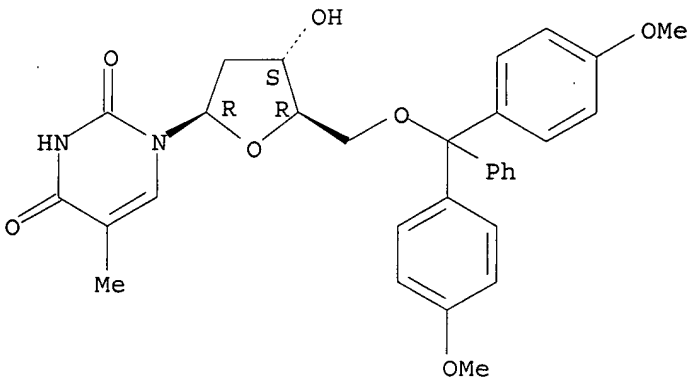
AB The present invention is directed to improved methods to synthesize oligonucleotide analogs having a acetal linkage, such as a 3',5'-formacetal (3'-O-CH2O-5'), 3',5'-thioformacetal (3'-S-CH2O-5') or an analogous 2',5' linkage between adjacent nucleoside analog residues, represented by the formula e.g. [I; n = 1-47; R = H, OH, alkoxy, alkenyloxy, halo; B = a purine or pyrimidine base; R9 = O, CH2; X = O, S; X1 = a protecting group stable to S- anion nucleophiles, (un)substituted 2- or 4-quinolinyl, 1-isoquinolinyl, 2- or 4-quinazolinyl, 2-quinoxalinyl, 2-pyridyl, 2-pyrimidinyl, or 9-acridinyl]. New 5'-, 3'- and 2'-phosphinate nucleoside analogs [II; B = a purine or pyrimidine base; R = H, alkoxy, alkenyloxy, halo; RA = XR7A, XR7B, SR7D, OR3, OCH2OP(O)R1R2; RB is linked to the 2' or 3' position and is XR7A, XR7B, XH, SR7D, OR3, or OCH2OP(O)R1R2, provided that either RA or RB = OCH2OP(O)R1R2, but not both RA and RB are OCH2OP(O)R1R2; R1, R2 = (un)substituted alkyl or heteroaryl or R1R2 = Q; wherein R9 = O, CH2; R3 = a Lewis acid-stable protecting group; R6 = O, CH2, CHF, CF2; R7A = an electron withdrawing sulfur-protecting group excluding CH2Ph; R7B = a protecting group stable to S- anion nucleophiles; R7D = (un)substituted 2- or 4-quinolinyl, 1-isoquinolinyl, 2- or 4-quinazolinyl, 2-quinoxalinyl, 2-pyridyl, 2-pyrimidinyl, or 9-acridinyl] , useful in the methods, are also prepared Thus, to a solution of 5'-O-(4,4'-dimethoxytrityl)thymidine and Ph3P,

was added di-Et azodicarboxylate at 0° and the reaction mixture was allowed to warm up to room temperature and stirred overnight to give the anhydrothymidine (III; DMT = 4,4'-dimethoxytrityl) (89%), which was refluxed with KOH in aqueous EtOH to give 1-(2'-deoxy-β-D-xylofuranosyl)thymine (IV; R = DMT, X = H, X1 = OH) and mesylated by MeSO2Cl in the presence of Et3N in pyridine to give the mesylate IV (R = DMT, X = H, X1 = OSO2Me) (100%). The latter mesylate was heated with AcOK in DMF at .apprx.90° for a few hours to give crude 3'-deoxy-3'-acetylthiothymidine derivative IV (R = DMT, X = SAc, X1 = H), which was stirred with MeSO3H in MeOH/CH2Cl2 at room temperature for 2 h to give IV (R = X1 = H, X = SAc) (89%). Benzoyl peroxide was added to a cooled (0°) and stirred mixture of the latter compound and Me2S in MeCN and the mixture was stirred at room temperature for 6 h to give the 5'-methylthiomethyl ether IV (R = MeSCH2, X = SAc, X1 = H) (62%), which was dissolved in 1,2-dichloroethane/Et2O and treated successively with diphenylphosphinic acid and N-iodosuccinimide, and stirred at room temperature for 1 h to give the diphenylphosphinate IV (R = Ph2P(O)OCH2, X = SAc, X1 = H) (100%). The latter compound was treated with a saturated solution of NH3 in MeOH at 0° for 10 min and alkylated with 4,4'-dimethoxytrityl chloride in the presence of diisopropylethylamine in THF at room temperature for 2 h to give the DMT thioether IV [R = Ph2P(O)OCH2, X = S-DMT, X1 = H] (V). This compound and 3'-deoxy-5'-O-pivaloyl-3'-(acetylthio)thymidine (preparation given) were dissolved in DMF/formamide, treated with DBU, and stirred at room temperature for 24 h to give the dimer VI (T = 1-thyminyl, n = 0, Piv = pivaloyl), which was detritylated with MeSO3H in CH2Cl2 containing mercaptoethanol and similarly condensed with the above DMT thioether V to give the trimer VI (n = 1).

IT 40615-39-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of oligonucleotide analog containing formacetal or thioformacetal internucleotide linkages)

RN 40615-39-2 CAPLUS
CN Thymidine, 5'-O-[bis(4-methoxyphenyl)phenylmethyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

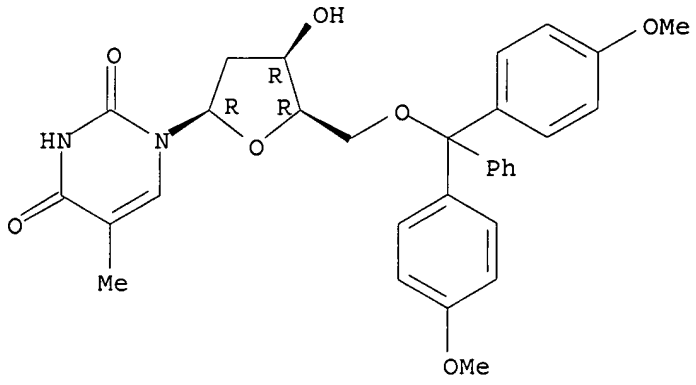



IT 112501-53-8P 143527-01-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of oligonucleotide analog containing formacetal or thioformacetal internucleotide linkages)

RN 112501-53-8 CAPLUS
CN 2,4(1H,3H)-Pyrimidinedione, 1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-2-

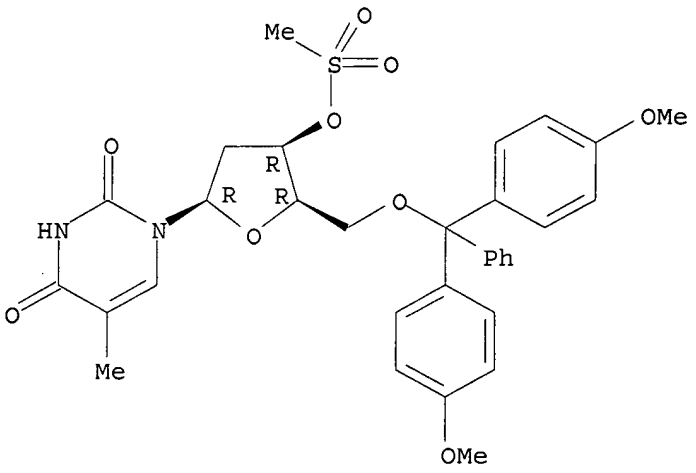
deoxy-β-D-threo-pentofuranosyl]-5-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).




RN 143527-01-9 CAPLUS
CN 2,4(1H,3H)-Pyrimidinedione, 1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-2-deoxy-3-O-(methylsulfonyl)-β-D-threo-pentofuranosyl]-5-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).




L8 ANSWER 15 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1995:823441 CAPLUS
DN 124:176813
TI Preparation of oligonucleotides containing 4'-substituted nucleotides
IN Maag, Hans; Rose, Samuel J.; Schmidt, Beat
PA Syntex (U.S.A.) Inc., USA
SO U.S., 18 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | US 5446137 | A | 19950829 | US 1993-164893 | 19931209 |
| | US 5446137 | B1 | 19981006 | | |
| | US 5750343 | A | 19980512 | US 1995-433855 | 19950502 |
| PRAI | US 1993-164893 | A3 | 19931209 | | |

OS MARPAT 124:176813
GI

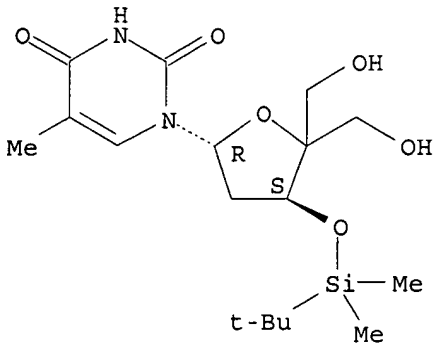
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Oligonucleotides having at least one nucleotide that is substituted at the 4' position of the sugar moiety with a substituent other than hydrogen which are represented by the general formula [I; A = purine or pyrimidine; B, B1 = H, OH, F, OMe, or SMe, provided that at least one of B and B1 = H; D1 = OH, OP(O)(OH)OX, OP(S)(OH)OX, OP(S)(SH)OX, OP(O)MeOX; wherein X = H, a nucleotide, or a protecting group; E = RY; wherein Y = H or a substituent that said nucleotide modifiable, separable, or detectable and R = a linking group; F = OH, OP(O)(OH)OX, wherein X = same as above], are prepared These oligonucleotides are useful as probes for hybridization assays and as therapeutic agents. Thus, Swern oxidation of 4'-(hydroxymethyl)thymidine derivative (II; E = CH2OH, R1 = H, R2 = SiMe2CMe3) with oxalyl chloride and DMSO in the presence of Et3N at -70° to room temperature over 23 h and tritylation of the the resulting aldehyde II (E = CHO, R1 = H, R2 = SiMe2CMe3) with 4,4'-dimethoxytrityl chloride (DMTrCl) in the presence of 4-dimethylaminopyridine in pyridine gave II (E = CHO, R1 = DMTr, R2 = SiMe2CMe3). Treatment of 5-hexenyltriphenylphosphonium bromide with NaH in DMSO followed by Wittig reaction with the latter aldehyde gave 4'-(1,7-heptadien-1-yl)thymidine derivative II (E = 1,7-heptadien-1-yl, R1 = DMTr, R2 = SiMe2CMe3) which underwent hydroboration-oxidation with borane-Me sulfide complex in THF and aqueous sodium perborate to give 4'-(7-hydroxy-1-hepten-1-yl)thymidine derivative II (E = 7-hydroxy-1-hepten-1-yl, R1 = DMTr, R2 = SiMe2CMe3). Mesylation of the latter alc. with methanesulfonyl chloride in pyridine followed by azidolysis with NaN3 in the presence of Bu4NI in refluxing benzene to an azide II (E = 7-azido-1-hepten-1-yl, R1 = DMTr, R2 = SiMe2CMe3), reduction with 1,3-propanedithiol in the presence of Et3N in MeOH, and acylation with Et trifluoroacetate in the presence of Et3N in MeOH gave II [E = CF3CONH(CH2)5CH:CH, R1 = DMTr, R2 = SiMe2CMe3]. Desilylation of the latter compound with Bu4NF in THF followed by condensation with 2-cyanoethyl N,N-diisopropylchlorophosphoramidite in the presence of diisopropylethylamine in THF gave a phosphoramidite II [E = CF3CONH(CH2)5CH:CH, R1 = DMTr, R2 = P(OCH2CH2CN)N(CHMe2)2] (III). III was incorporated into oligonucleotides by the solid-phase β-cyanoethyl N,N-diisopropylphosphoramidite method on an automated DNA synthesizer (Milligen/Biosearch 8700), followed by labeling the resulting oligonucleotides with biotinyl-ε-caproic-N-hydroxy succinimide ester, to give biotin-labeled oligonucleotides, e.g. 5'-GTTCGCCTACGT*GGCCTTTG-3' (T* = Q) (IV). IV formed a double stranded DNA mol. with the target sequence 5'-CAAGCGGATGCACCGGAAAC-3' and showed Tm of 64.5° as compared to 66.2° for the unmodified sequence 5'-GTTCGCCTACGTGGCCTTTG-3'.

IT 139887-99-3P 139888-01-0P 172280-71-6P
172280-72-7P 172280-73-8P 172280-74-9P
172280-75-0P 172280-76-1P 172280-77-2P
172280-78-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of oligonucleotides containing 4'-substituted nucleotides as probes
for DNA hybridization assay and as therapeutic agents)

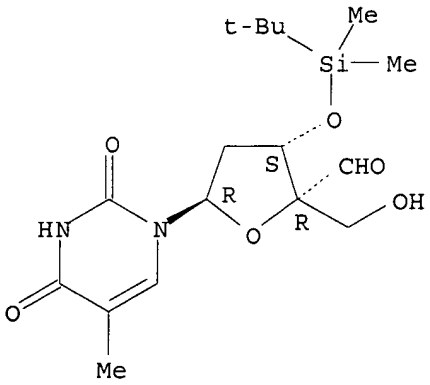
RN 139887-99-3 CAPLUS
CN Thymidine, 3'-O-[(1,1-dimethylethyl)dimethylsilyl]-4'-(hydroxymethyl)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



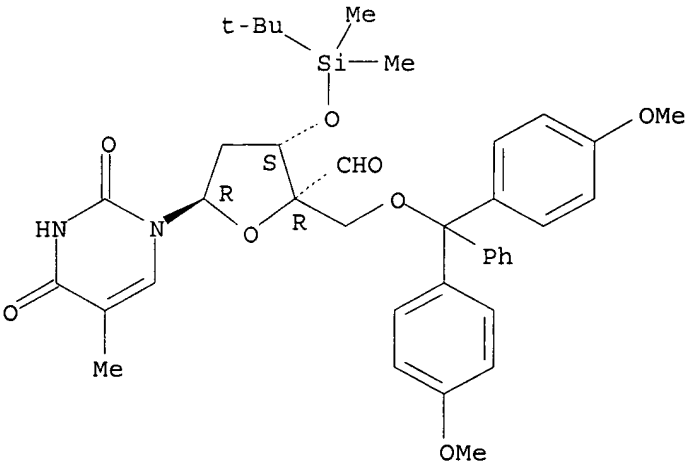
RN 139888-01-0 CAPLUS
CN Thymidine, 3'-O-[(1,1-dimethylethyl)dimethylsilyl]-4'-formyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 172280-71-6 CAPLUS
CN Thymidine, 5'-O-[bis(4-methoxyphenyl)phenylmethyl]-3'-O-[(1,1-dimethylethyl)dimethylsilyl]-4'-C-formyl- (9CI) (CA INDEX NAME)

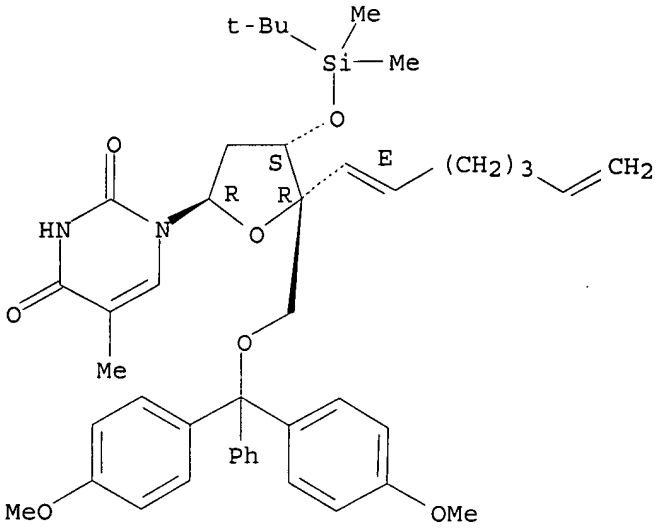
Absolute stereochemistry.



RN 172280-72-7 CAPLUS

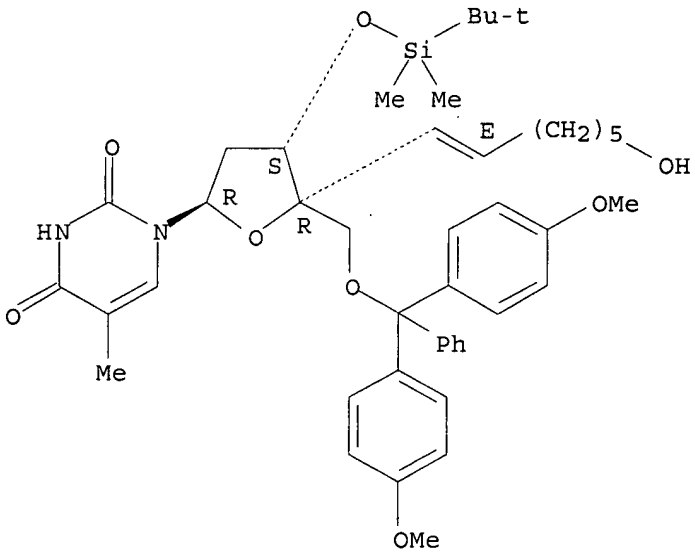
CN Thymidine, 5'-O-[bis(4-methoxyphenyl)phenylmethyl]-3'-O-[(1,1-dimethylethyl)dimethylsilyl]-4'-C-1,6-heptadienyl-, (E)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.




RN 172280-73-8 CAPLUS
CN Thymidine, 5'-O-[bis(4-methoxyphenyl)phenylmethyl]-3'-O-[(1,1-dimethylethyl)dimethylsilyl]-4'-C-(7-hydroxy-1-heptenyl)-, (E)- (9CI) (CA INDEX NAME)

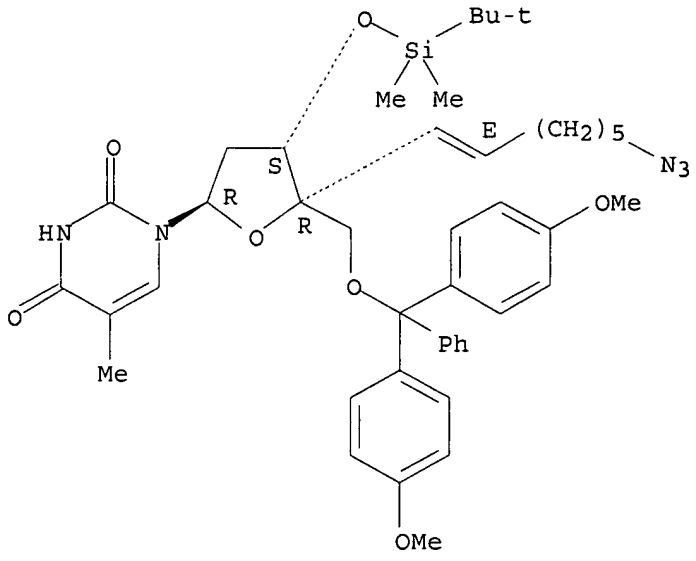
Absolute stereochemistry.
Double bond geometry as shown.




RN 172280-74-9 CAPLUS
CN Thymidine, 4'-C-(7-azido-1-heptenyl)-5'-O-[bis(4-methoxyphenyl)phenylmethyl]-3'-O-[(1,1-dimethylethyl)dimethylsilyl]-, (E)- (9CI) (CA INDEX NAME)

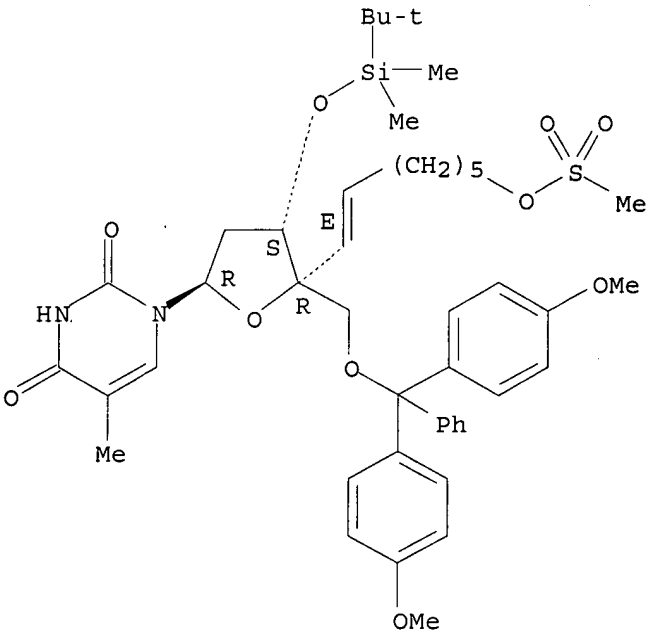
Absolute stereochemistry.

Double bond geometry as shown.



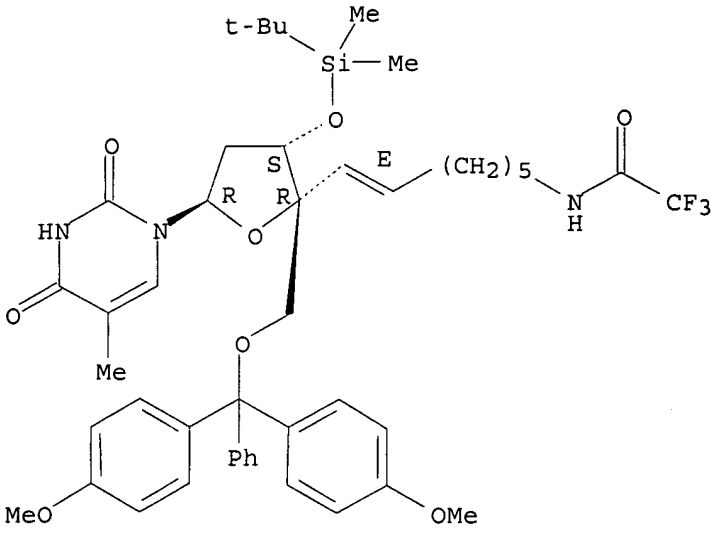

RN 172280-75-0 CAPLUS
CN Thymidine, 5'-O-[bis(4-methoxyphenyl)phenylmethyl]-3'-O-[(1,1-dimethylethyl)dimethylsilyl]-4'-C-[7-[(methylsulfonyl)oxy]-1-heptenyl]-, (E)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.




RN 172280-76-1 CAPLUS
CN Thymidine, 5'-O-[bis(4-methoxyphenyl)phenylmethyl]-3'-O-[(1,1-dimethylethyl)dimethylsilyl]-4'-C-[7-[(trifluoroacetyl)amino]-1-heptenyl]-, (E)- (9CI) (CA INDEX NAME)

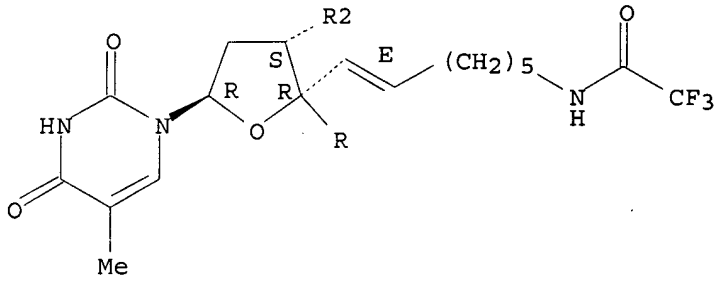
Absolute stereochemistry.
Double bond geometry as shown.

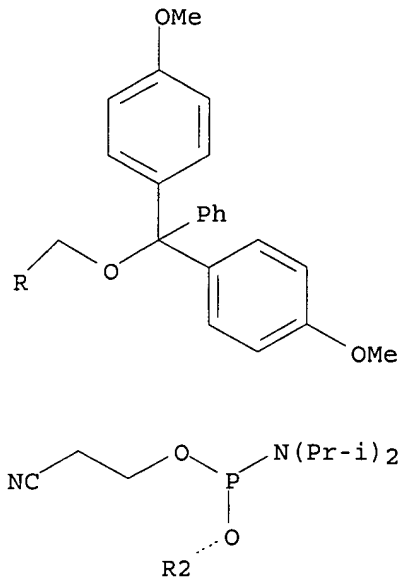



RN 172280-77-2 CAPLUS
CN Thymidine, 5'-O-[bis(4-methoxyphenyl)phenylmethyl]-4'-C-[7-[(trifluoroacetyl)amino]-1-heptenyl]-, 3'-[2-cyanoethyl bis(1-methylethyl)phosphoramidite], (E)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

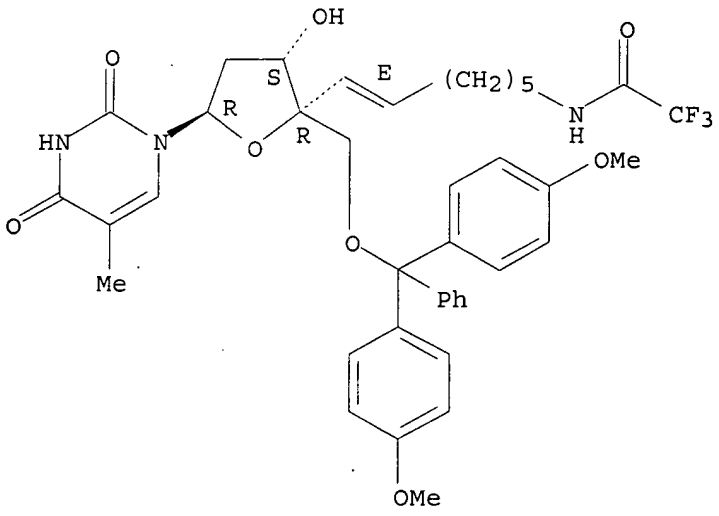
PAGE 1-A



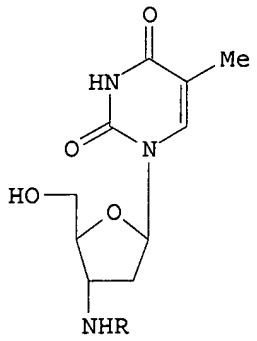



RN 172280-78-3 CAPLUS
CN Thymidine, 5'-O-[bis(4-methoxyphenyl)phenylmethyl]-4'-C-[7-[(trifluoroacetyl)amino]-1-heptenyl]-, (E)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.




L8 ANSWER 16 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1994:245665 CAPLUS
DN 120:245665
TI Synthesis of 3'-N-substituted 3'-amino-3'-deoxythymidine derivatives
AU Celewicz, Lech; Urjasz, Wojciech; Golankiewicz, Krzysztof
CS Fac. Chem., Adam Mickiewicz Univ., Poznan, 60-780, Pol.
SO Nucleosides & Nucleotides (1993), 12(9), 951-6
CODEN: NUNUD5; ISSN: 0732-8311
DT Journal
LA English
OS CASREACT 120:245665
GI



I

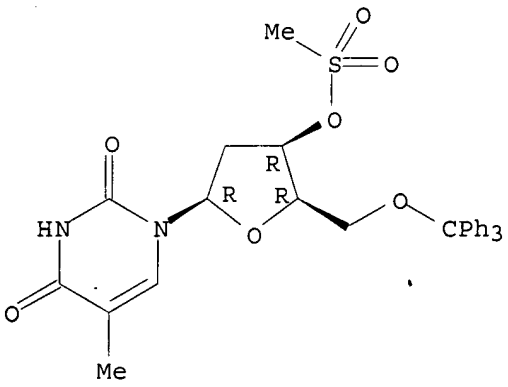
AB A series of 3'-N-substituted 3'-amino-3'-deoxythymidine derivs., e.g. I (R = Me, Et, Pr, CHMe2Bn, CH2CH:CH2), with alkyl, alkenyl and alkylaryl substituents was synthesized by two methods. The first method involved the reaction of 1-(2,3-dideoxy-3-O-mesyl -5-O-trityl-β-D-threo-pentofuranosyl)thymine with an appropriate amine. In the second method, 3'-amino-5'-O-trityl-3'-deoxy-thymidine served as a synthetic precursor which was reacted with an appropriate aldehyde or ketone followed by sodium borohydride reduction An improved synthesis of 3'-amino-3'-deoxythymidine from 3'-azido-5'-O-trityl-3'-deoxythymidine using sodium borohydride was also described.

IT 104218-44-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(amination of)

RN 104218-44-2 CAPLUS

CN 2,4(1H,3H)-Pyrimidinedione, 1-[2-deoxy-3-O-(methylsulfonyl)-5-O-(triphenylmethyl)-β-D-threo-pentofuranosyl]-5-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L8 ANSWER 17 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1987:459403 CAPLUS

DN 107:59403

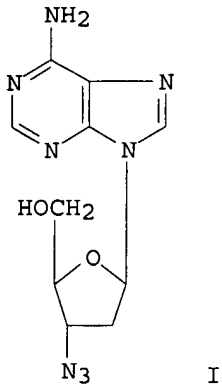
TI 3'-Substituted 2',3'-dideoxynucleoside analogs as potential anti-HIV (HTLV-III/LAV) agents

AU Herdewijn, Piet; Balzarini, Jan; De Clercq, Erik; Pauwels, Rudi; Baba, Masanori; Broder, Samuel; Vanderhaeghe, Hubert

CS Raga Inst. Med. Res., Kathol. Univ. Leuven, Louvain, B-3000, Belg.

SO Journal of Medicinal Chemistry (1987), 30(8), 1270-8
CODEN: JMCMAR; ISSN: 0022-2623

DT Journal
LA English
OS CASREACT 107:59403
GI



I

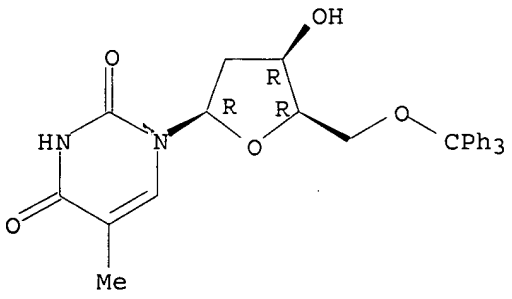
AB A series of 2',3'-unsatd. and 3'-substituted 2',3'-dideoxynucleoside analogs of purines and pyrimidnes were prepared by standard methods and evaluated for their inhibitory activity against human immunodeficiency virus (HIV). For example, 9-(2-deoxy-5-O-monomethoxytrityl-β-D-threo-pentofuranosyl)adenine on sequential mesylation, azidolysis, and deprotection gave nucleoside I. The 2',3'-unsatd. analogs of 2',3'-dideoxycytidine (ddeCyd) and 2',3'-dideoxythymidine (ddeThd), 3'-azido-2',3'-dideoxythymidine (AzddThd), 3'-fluoro-2',3'-dideoxythymidine, 2',3'-dideoxycytidine (ddCyd), and 2',3'-dideoxyadenosine (ddAdo) emerged as the most potent inhibitors of HIV-induced cytopathogenicity in the human T lymphocyte cell lines ATH8 and MT4. In ATH8 cells ddCyd, ddeCyd, and ddAdo had the highest therapeutic index whereas in MT4 cells AzddThd, ddThd, ddCyd, and ddAdo were the most selective. Derivs. from ddThd in which the substituent group was linked to the 3'-carbon atom via a thio, sulfonyl, or oxygen bridge were far less inhibitory to HIV than was AzddThd.

IT 55612-11-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(fluorination of)

RN 55612-11-8 CAPLUS

CN 2,4(1H,3H)-Pyrimidinedione, 1-[2-deoxy-5-O-(triphenylmethyl)-β-D-threo-pentofuranosyl]-5-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

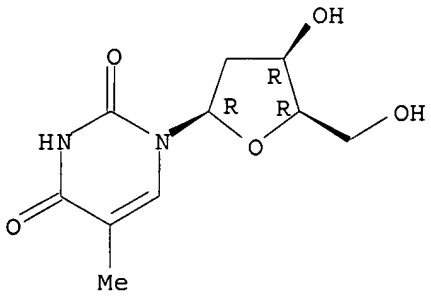


IT 16053-52-4 22423-07-0 34308-10-6
81542-72-5 94919-65-0
RL: USES (Uses)

(inhibitor, of human immunodeficiency virus replication)

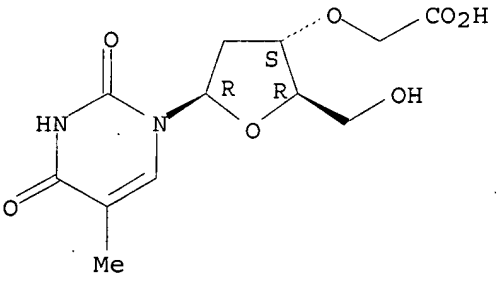
RN 16053-52-4 CAPLUS
CN 2,4(1H,3H)-Pyrimidinedione, 1-(2-deoxy-β-D-threo-pentofuranosyl)-5-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).




RN 22423-07-0 CAPLUS
CN Thymidine, 3'-O-(carboxymethyl)-, monosodium salt (8CI, 9CI) (CA INDEX NAME)

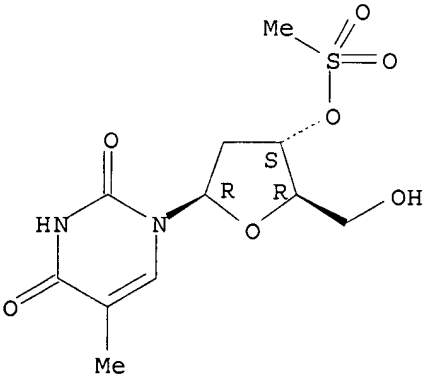
Absolute stereochemistry.




● Na

RN 34308-10-6 CAPLUS
CN Thymidine, 3'-methanesulfonate (7CI, 8CI, 9CI) (CA INDEX NAME)

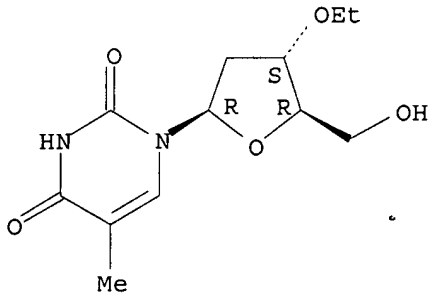
Absolute stereochemistry.




RN 81542-72-5 CAPLUS

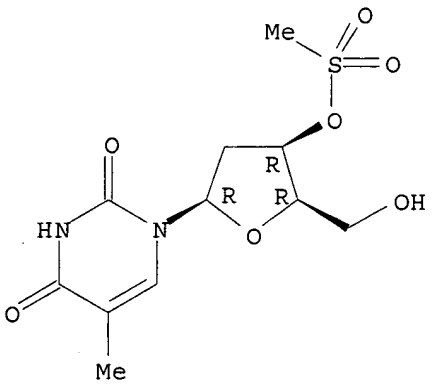
CN Thymidine, 3'-O-ethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



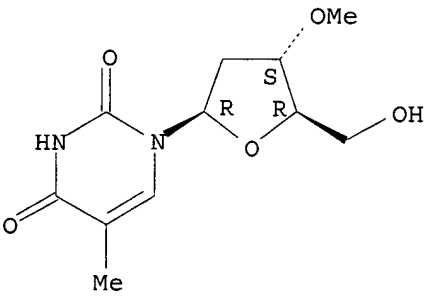
RN 94919-65-0 CAPLUS
CN 2,4(1H,3H)-Pyrimidinedione, 1-[2-deoxy-3-O-(methylsulfonyl)-β-D-threo-pentofuranosyl]-5-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 108895-42-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and inhibition of human immunodeficiency virus replication by)
RN 108895-42-7 CAPLUS
CN Thymidine, 3'-O-methyl- (9CI) (CA INDEX NAME)

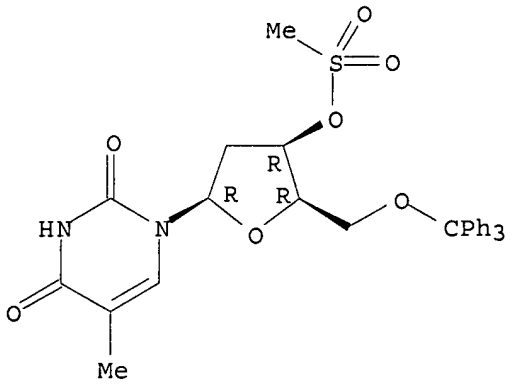
Absolute stereochemistry.



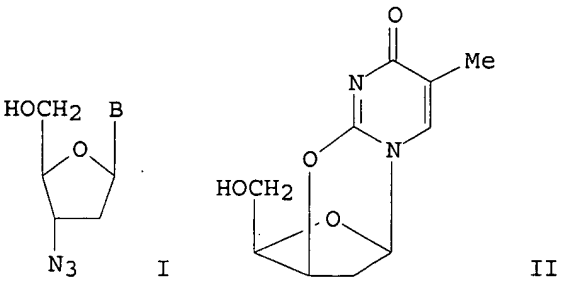
IT 104218-44-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with potassium thiocyanate or conversion of, to deoxythymidine)

RN 104218-44-2 CAPLUS
CN 2,4(1H,3H)-Pyrimidinedione, 1-[2-deoxy-3-O-(methylsulfonyl)-5-O-(triphenylmethyl)-β-D-threo-pentofuranosyl]-5-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L8 ANSWER 18 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1984:592378 CAPLUS
DN 101:192378
TI Aminonucleosides and their derivatives. XI. Synthesis of 3'-amino-2', 3'-dideoxynucleoside 5'-triphosphates
AU Zaitseva, V. E.; Dyatkina, N. B.; Kraevskii, A. A.; Skaptsova, N. V.; Turina, O. V.; Gnuchev, N. V.; Gottikh, B. P.; Azhaev, A. V.
CS Inst. Mol. Biol., Moscow, USSR
SO Bioorganicheskaya Khimiya (1984), 10(5), 670-80
CODEN: BIKHD7; ISSN: 0132-3423
DT Journal
LA Russian
GI

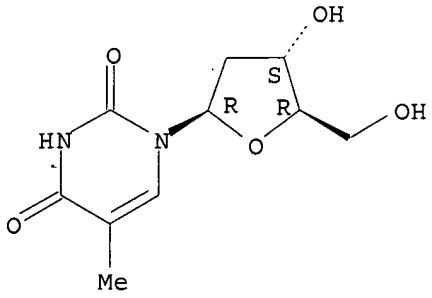


I II

AB 3'-Azido-2',3'-dideoxynucleosides I (B = thymine, adenine, guanine) were prepared by modifications of conventional methods. I (B = cytosine, uracil) were prepared from 2'-deoxycytidine and 2'-deoxyuridine, resp., via ring opening of 3',O2-anhydro derivs., e.g. II, with LiN3. I were converted to their 5'-monophosphates and triphosphates and the latter were reduced to the corresponding 3'-amino-2,3-dideoxynucleoside 5'-triphosphates which are effective inhibitors of DNA synthesis catalyzed by DNA polymerases (no data).
IT 50-89-5, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(mesylation of)
RN 50-89-5 CAPLUS

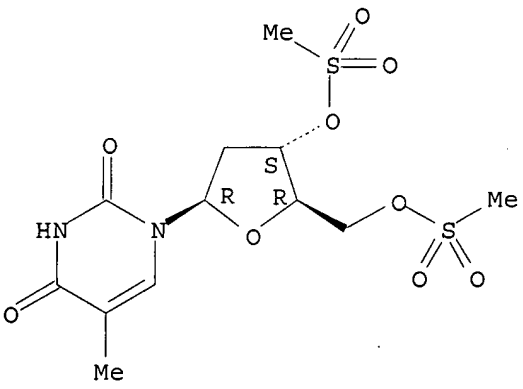
CN Thymidine (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



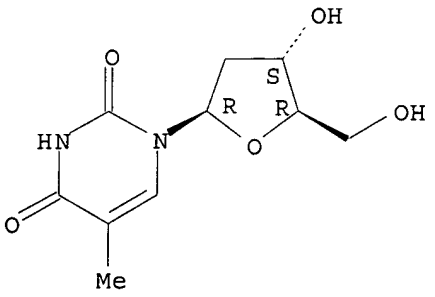
IT 56822-33-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and intramol. cyclocondensation of)
RN 56822-33-4 CAPLUS
CN Thymidine, 3',5'-dimethanesulfonate (7CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 50-89-5P, reactions
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and monomethoxytritylation of)
RN 50-89-5 CAPLUS
CN Thymidine (8CI, 9CI) (CA INDEX NAME)

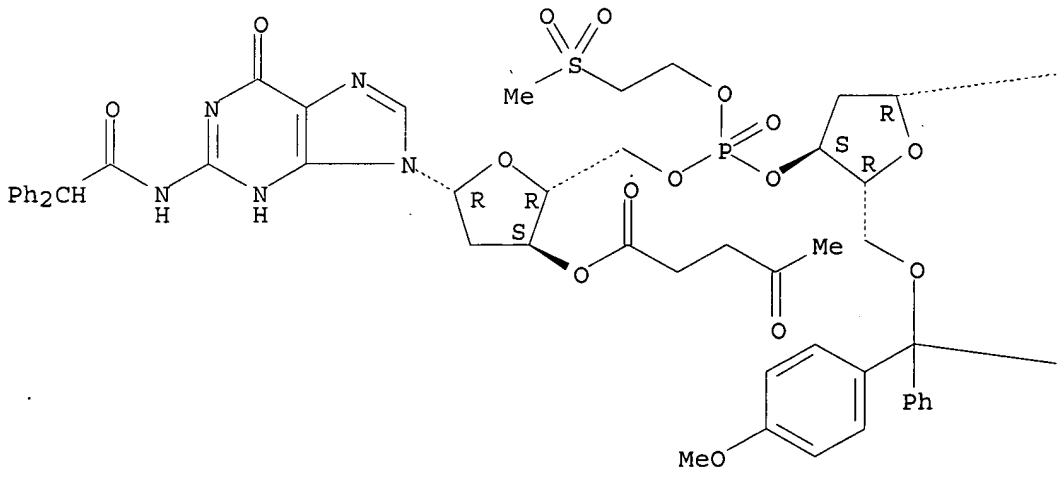
Absolute stereochemistry.

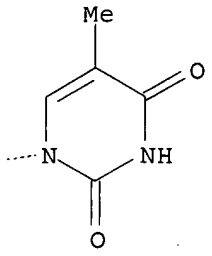


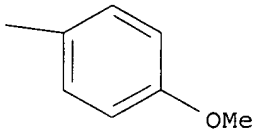
L8 ANSWER 19 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1984:473047 CAPLUS
DN 101:73047
TI Use of 2-methylsulfonylethyl as a phosphorus protecting group in oligonucleotide synthesis via a phosphite triester approach
AU Claesen, C.; Tesser, G. I.; Dreef, C. E.; Marugg, J. E.; Van der Marel, G. A.; Van Boom, J. H.
CS Dep. Chem., Univ. Nijmegen, Nijmegen, 6525 ED, Neth.
SO Tetrahedron Letters (1984), 25(12), 1307-10
CODEN: TELEAY; ISSN: 0040-4039
DT Journal
LA English
AB MeSO2CH2CH2OPCl2 was converted into the mono-N-morpholino derivative and applied for the preparation of 5'-O,N-protected deoxynucleoside-3'-phosphoramidites. The latter intermediates were used in the presence of 1-hydroxybenzotriazole for the formation of 3'-5'-phosphotriester linkages. The 2-methylsulfonylethyl protecting group was removed selectively and rapidly under mild basic conditions.
IT 91290-11-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and deblocking of)
RN 91290-11-8 CAPLUS
CN Guanosine, 5'-O-[bis(4-methoxyphenyl)phenylmethyl]-P-[2-(methylsulfonyl)ethyl]thymidylyl-(3'→5')-2'-deoxy-N-(diphenylacetyl)-, 3'-(4-oxopentanoate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

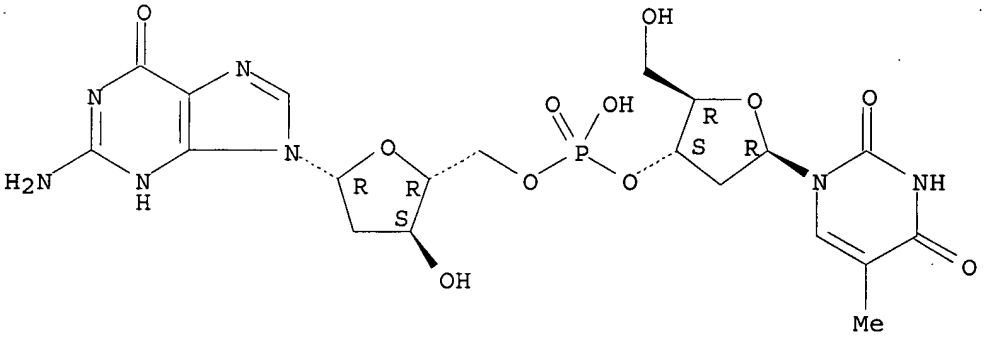






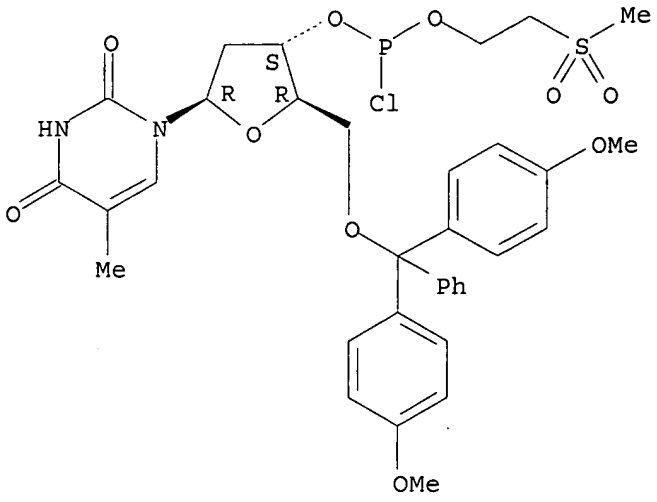
IT 4251-20-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 4251-20-1 CAPLUS
CN Guanosine, thymidylyl-(3'→5')-2'-deoxy- (7CI, 8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 91290-10-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, intermediate in synthesis of oligonucleotide)
RN 91290-10-7 CAPLUS
CN Thymidine, 5'-O-[bis(4-methoxyphenyl)phenylmethyl]-, 3'-[2-(methylsulfonyl)ethyl phosphorochloridite] (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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=> dis hist

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     FILE 'REGISTRY' ENTERED AT 16:00:52 ON 04 AUG 2006
L1             STRUCTURE UPLOADED
L2              50 S L1 SSS SAM
L3           48760 S L2 SSS FULL
L4             STRUCTURE UPLOADED
L5              50 S L4 SSS SAM
L6           39556 S L4 SSS FULL

     FILE 'CAPLUS' ENTERED AT 16:06:25 ON 04 AUG 2006
L7             106 S L6 AND MESYL?
L8              19 S L7 AND METHOD
```

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.


Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 23 JUL 2006 HIGHEST RN 895579-80-3
DICTIONARY FILE UPDATES: 23 JUL 2006 HIGHEST RN 895579-80-3

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TSCA INFORMATION NOW CURRENT THROUGH January 6, 2006

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/ONLINE/UG/regprops.html

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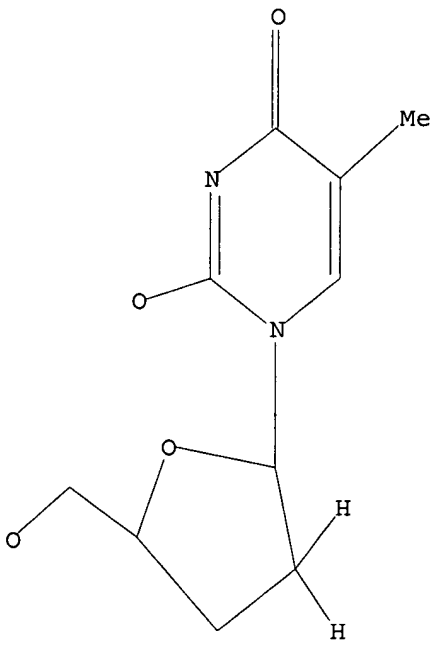
Uploading C:\Program Files\Stnexp\Queries\10736084.str

L1 STRUCTURE UPLOADED

=> d l1
L1 HAS NO ANSWERS
L1 STR




Structure attributes must be viewed using STN Express query preparation.

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SAMPLE SCREEN SEARCH COMPLETED - 2883 TO ITERATE

69.4% PROCESSED 2000 ITERATIONS 50 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 54440 TO 60880
PROJECTED ANSWERS: 38253 TO 43681

L2 50 SEA SSS SAM L1

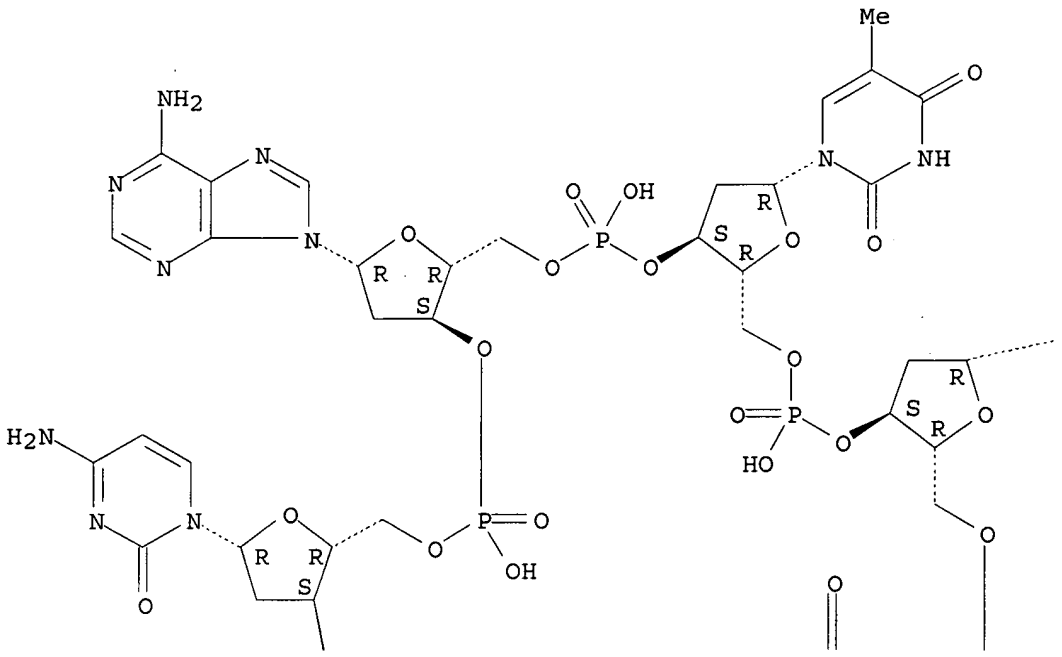
=> d scan

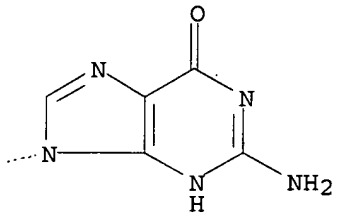
L2 50 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN
IN L-Alanine, N-acetyl-L-cysteinyl-4-amino-1-methyl-1H-pyrrole-2-carbonyl-O-(2'-deoxycytidylyl-(3'→5')-2'-deoxyguanylyl-(3'→5')-thymidylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')-2'-deoxycytidylyl-(3'→5')-2'-deoxy-3'-guanylyl)-L-homoseryl- (9CI)
SQL 4
MF C76 H100 N28 O43 P6 S

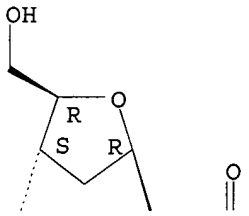
**RELATED SEQUENCES AVAILABLE WITH SEQLINK**

Absolute stereochemistry.

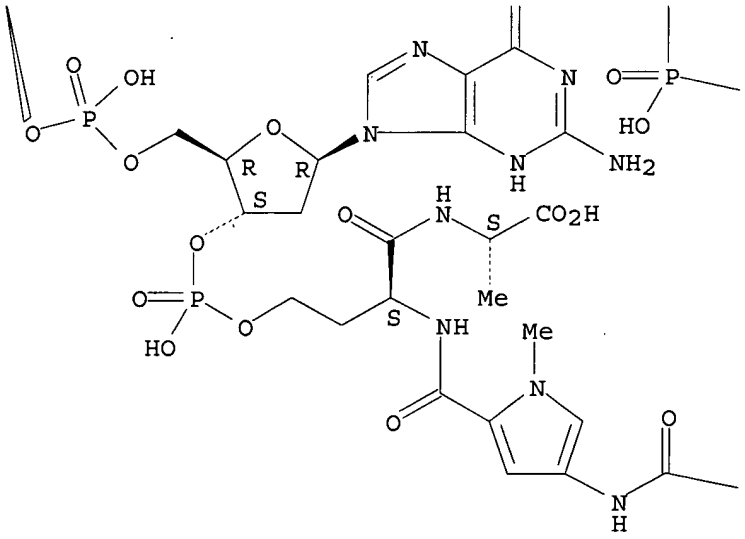


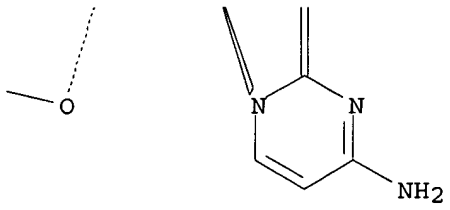


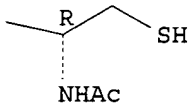












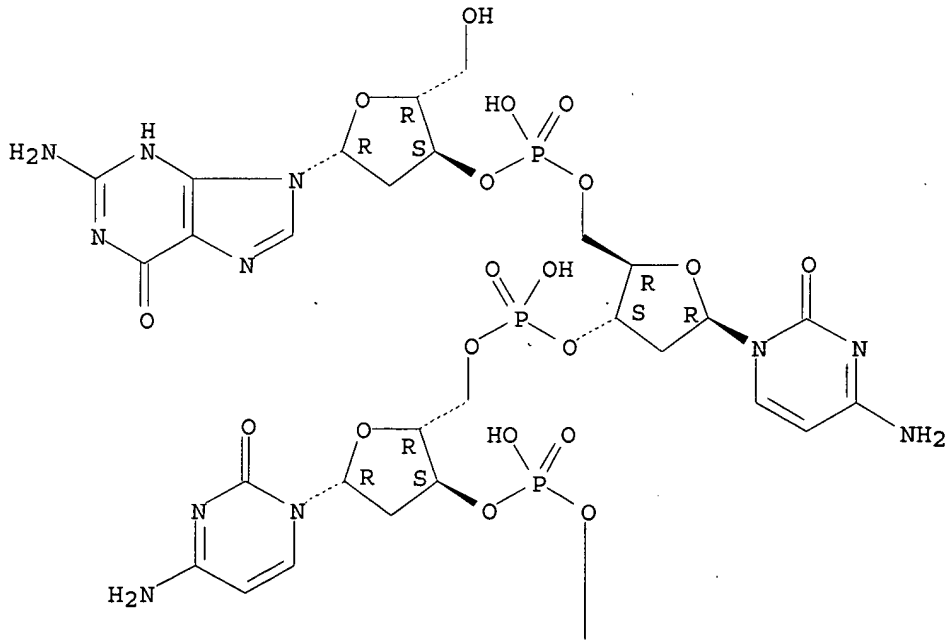
**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

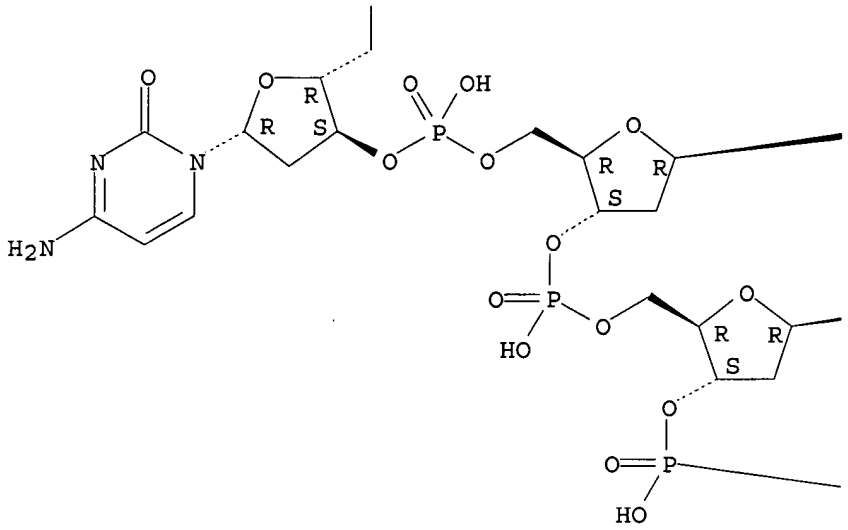
L2 50 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN
IN Adenosine, 2'-deoxyguanylyl-(3'→5')-2'-deoxycytidylyl-(3'→5')-2'-deoxycytidylyl-(3'→5')-2'-deoxycytidylyl-(3'→5')-2'-deoxycytidylyl-(3'→5')-thymidylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')-2'-deoxy- (9CI)
MF C76 H98 N29 O45 P7

Absolute stereochemistry.

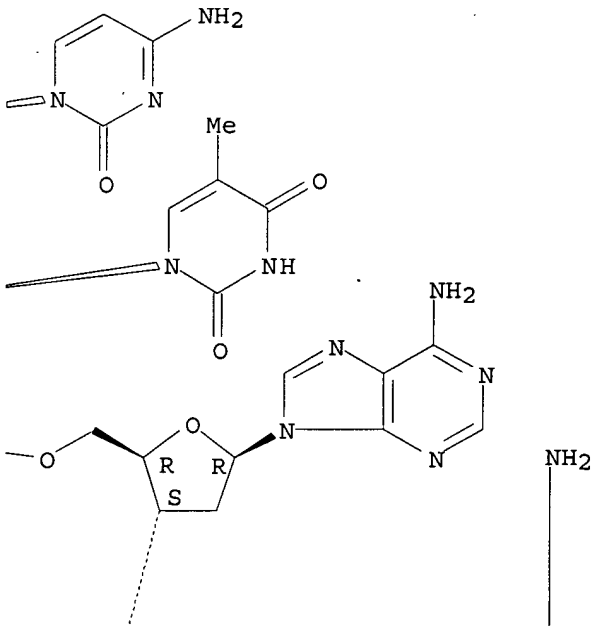


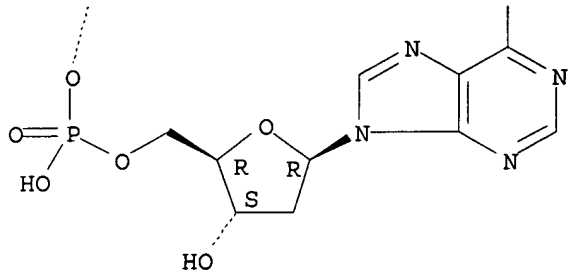


PAGE 2-A



PAGE 2-B



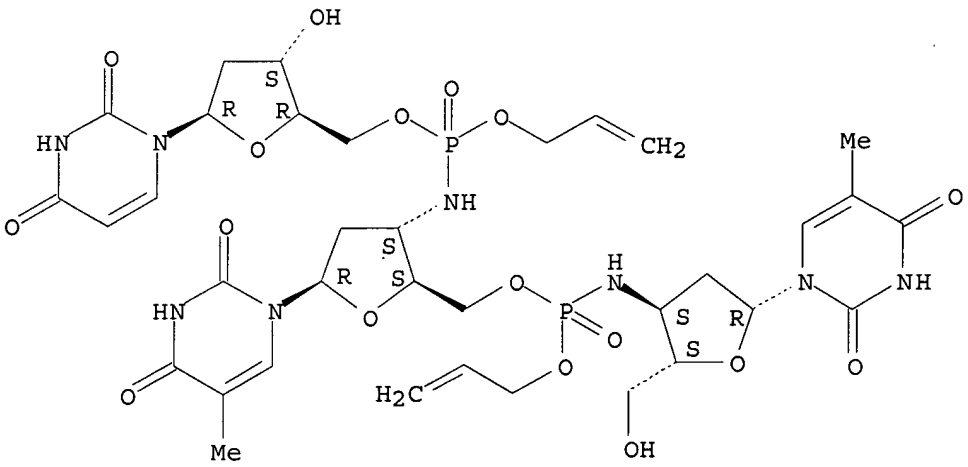


**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L2 50 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN
IN Uridine, 3'-amino-3'-deoxy-P-2-propenylthymidylyl-(3'→5')-3'-amino-3'-deoxy-P-2-propenylthymidylyl-(3'→5')-2'-deoxy- (9CI)
MF C35 H48 N8 O17 P2

Absolute stereochemistry.



**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):end

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FULL SCREEN SEARCH COMPLETED - 61666 TO ITERATE

100.0% PROCESSED 61666 ITERATIONS 44094 ANSWERS
SEARCH TIME: 00.00.02

L3 44094 SEA SSS FUL L1

=> file caplus
COST IN U.S. DOLLARS SINCE FILE ENTRY TOTAL SESSION

FULL ESTIMATED COST 168.26 168.47

FILE 'CAPLUS' ENTERED AT 16:23:16 ON 25 JUL 2006
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.


FILE COVERS 1907 - 25 Jul 2006 VOL 145 ISS 5
FILE LAST UPDATED: 24 Jul 2006 (20060724/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply.
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http://www.cas.org/infopolicy.html

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=> s l3 and(process or method or production or synthe?)
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       2273048 PROCESS
       1542952 PROCESSES
       3394378 PROCESS
                 (PROCESS OR PROCESSES)
       3140200 METHOD
       1285470 METHODS
       4063598 METHOD
                 (METHOD OR METHODS)
        601148 PRODUCTION
          3173 PRODUCTIONS
        603465 PRODUCTION
                 (PRODUCTION OR PRODUCTIONS)
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                 (PRODN OR PRODNS)
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L5          33 L4 AND ENOL?

=> dis l5 1-33 bib abs hitstr

L5   ANSWER 1 OF 33  CAPLUS  COPYRIGHT 2006 ACS on STN
AN   2006:544511  CAPLUS
DN   145:44357
TI   Use of molecular beacons detecting cyclin D1 and survivin mRNAs in
     diagnostic imaging of cancer cells
IN   Yang, Lily
PA   Emory University, USA
SO   PCT Int. Appl., 80 pp.
     CODEN: PIXXD2
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DT Patent
LA English
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | WO 2006060561 | A2 | 20060608 | WO 2005-US43450 | 20051201 |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

| | | | |
|---|---|---|---|
| PRAI | US 2004-632666P | P | 20041201 |
| | US 2005-542117 | A | 20050712 |

AB A method of detecting the level of expression of diagnostic gene in a sample of cells for cancer diagnosis using mol. beacon probes is described. Specifically, the use of probes for the detection of cyclin D1 and survivin mRNAs are described for the diagnosis of breast cancer. The development of systems for the detection of cyclin D1 and survivin mRNAs is demonstrated. Use of mol. beacons to detect alleles of the K-ras gene in the diagnosis of pancreatic cancer is also demonstrated.

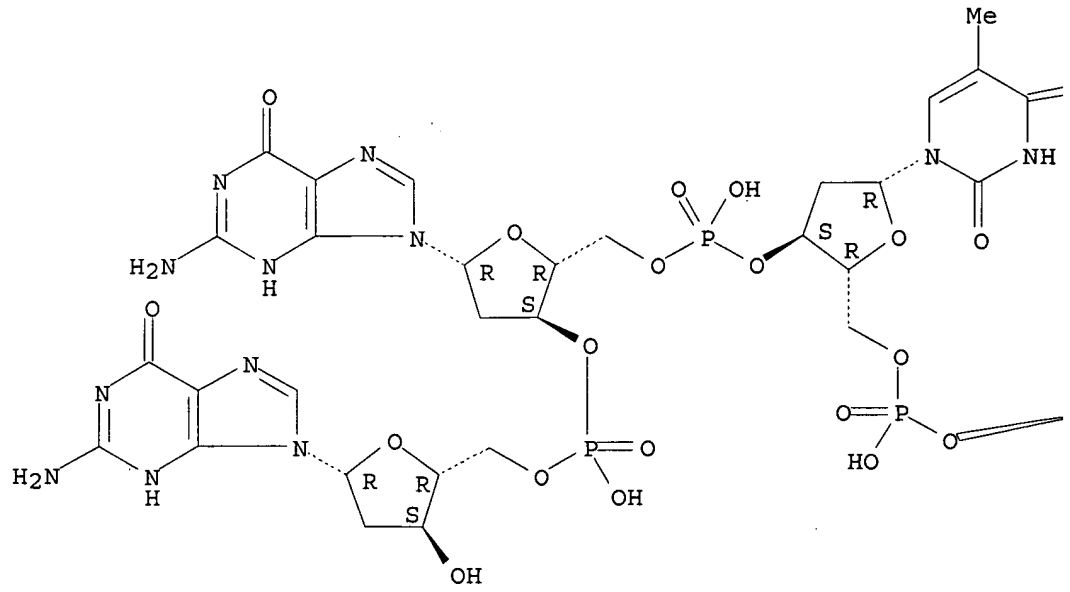
IT 82049-94-3
RL: PRP (Properties)
(unclaimed sequence; use of mol. beacons detecting cyclin D1 and survivin mRNAs in diagnostic imaging of cancer cells)

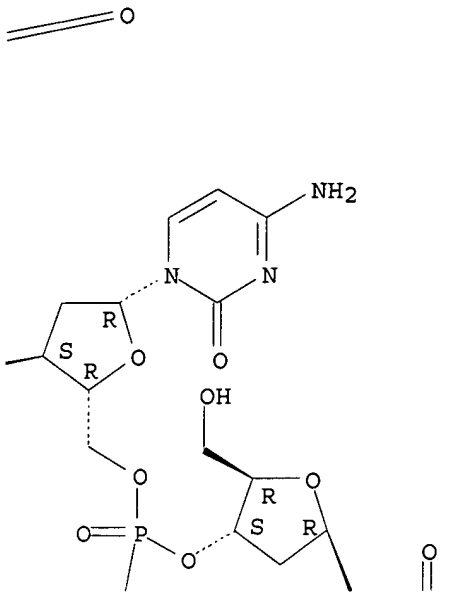
RN 82049-94-3 CAPLUS

CN Guanosine, 2'-deoxycytidylyl-(3'→5')-2'-deoxycytidylyl-(3'→5')-thymidylyl-(3'→5')-2'-deoxyguanylyl-(3'→5')-2'-deoxy- (9CI) (CA INDEX NAME)

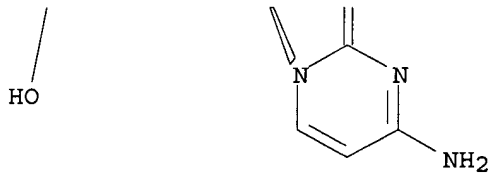
Absolute stereochemistry.











L5 ANSWER 2 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2006:100738 CAPLUS
DN 144:198849
TI Novel dosage form comprising modified-release and immediate-release active ingredients
IN Vaya, Navin; Karan, Rajesh Singh; Sadanand, Sunil; Gupta, Vinod Kumar
PA India
SO U.S. Pat. Appl. Publ., 49 pp., Cont.-in-part of U.S. Ser. No. 630,446.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 2

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | US 2006024365 | A1 | 20060202 | US 2005-134633 | 20050519 |
| | IN 193042 | A | 20040626 | IN 2002-MU697 | 20020805 |
| | US 2004096499 | A1 | 20040520 | US 2003-630446 | 20030729 |
| PRAI | IN 2002-MU697 | A | 20020805 | | |
| | IN 2002-MU699 | A | 20020805 | | |
| | IN 2003-MU80 | A | 20030122 | | |
| | IN 2003-MU82 | A | 20030122 | | |
| | US 2003-630446 | A2 | 20030729 | | |

AB A dosage form comprising of a high dose, high solubility active ingredient as modified release and a low dose active ingredient as immediate release where the weight ratio of immediate release active ingredient and modified

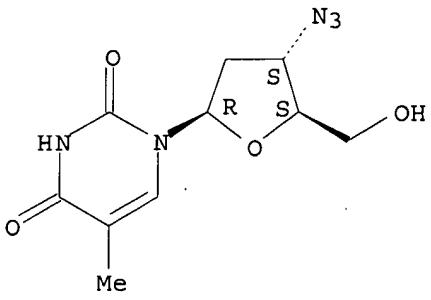
release active ingredient is from 1:10 to 1:15000 and the weight of modified release active ingredient per unit is from 500 mg to 1500 mg; a process for preparing the dosage form. Tablets containing 10 mg sodium pravastatin and 1000 mg niacin were prepared The release of sodium pravastatin after 24 h was 67.7%, and the release of niacin after 1 h was 84.1%.

IT 30516-87-1, Zidovudine
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(novel dosage form comprising modified-release and immediate-release active ingredients)

RN 30516-87-1 CAPLUS

CN Thymidine, 3'-azido-3'-deoxy- (7CI, 8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).




L5 ANSWER 3 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:1154777 CAPLUS

DN 143:433974

TI Gene expression profiling and markers for use in the assessment of hepatotoxicity

IN Porter, Mark; Higgs, Brandon; Mendrick, Donna; Elashoff, Michael

PA Gene Logic, Inc., USA

SO PCT Int. Appl., 264 pp.
CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI WO 2005100989 | A2 | 20051027 | WO 2005-US11532 | 20050407 |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

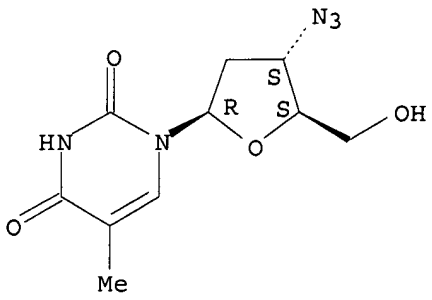
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI US 2004-559949P P 20040407

AB Methods of using the effects of a substance on gene expression profiles are described for use in assessing their toxicity, especially hepatotoxicity, are described. The invention also includes microarrays, computer systems comprising the toxicity prediction models, as well as methods of using the computer systems by remote users for determining the toxicity of test agents. A database of gene expression profiles for rat liver using a broad range of drugs, com. chems., and known poisons is

developed.
IT 30516-87-1
RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BIOL (Biological study)
(assessing hepatotoxicity of; gene expression profiling and markers for use in assessment of hepatotoxicity)
RN 30516-87-1 CAPLUS
CN Thymidine, 3'-azido-3'-deoxy- (7CI, 8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

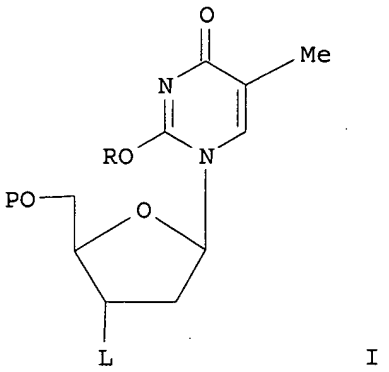



L5 ANSWER 4 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:527461 CAPLUS
DN 143:26813
TI Method for preparing fluorine-radiolabeled thymidine
IN Walsh, Joseph C.; Padgett, Henry C.
PA CTI PET Systems, Inc., USA
SO U.S. Pat. Appl. Publ., 11 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | US 2005131224 | A1 | 20050616 | US 2003-736084 | 20031215 |
| | WO 2005058246 | A2 | 20050630 | WO 2004-US41954 | 20041215 |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI US 2003-736084 A 20031215
OS CASREACT 143:26813; MARPAT 143:26813
GI



I

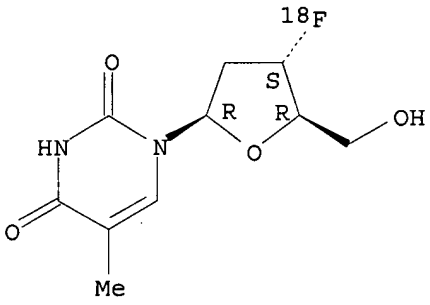
AB The invention is a novel method and precursor for preparing fluorine-radiolabeled nucleosides I, wherein R is alkoxy blocking group; P is hydroxyl protecting group; L is leaving group. In particular, the invention is useful for preparing 3'-[18F]fluorothymidine. The method uses an enol group that is attached to the 2-position on the pyrimidine ring. The enol group attenuates thymidines activity so that the thymidine is easily radiolabeled in short number of steps with good yield.

IT 287114-80-1P
RL: IMF (Industrial manufacture); PREP (Preparation)
(Method for preparing fluorine-radiolabeled thymidine)

RN 287114-80-1 CAPLUS

CN Thymidine, 3'-deoxy-3'-(fluoro-18F)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

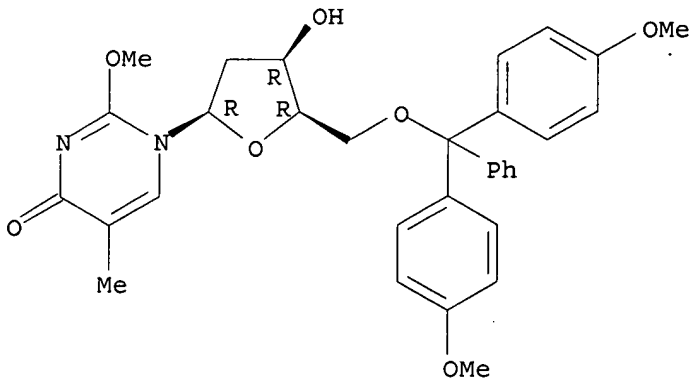


IT 852689-54-4P 852689-55-5P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(Method for preparing fluorine-radiolabeled thymidine)

RN 852689-54-4 CAPLUS

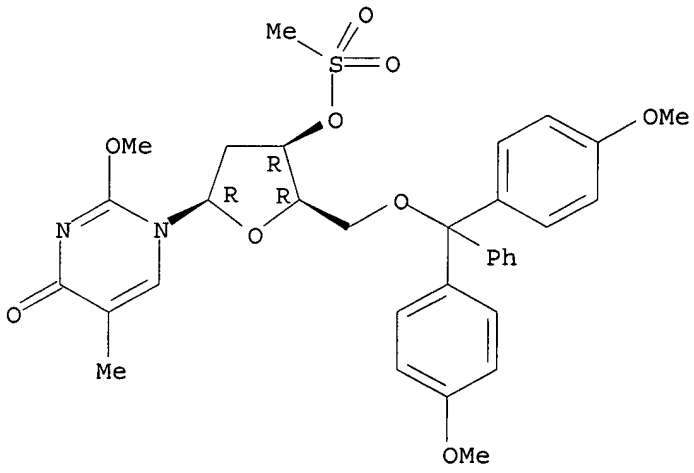
CN 4(1H)-Pyrimidinone, 1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-2-deoxy-β-D-threo-pentofuranosyl]-2-methoxy-5-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



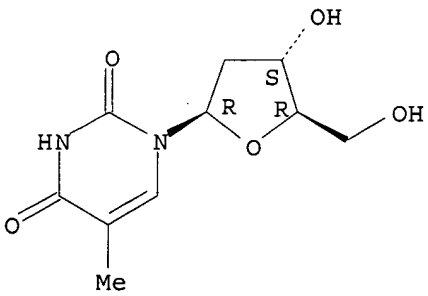

RN 852689-55-5 CAPLUS
CN 4(1H)-Pyrimidinone, 1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-2-deoxy-3-O-(methylsulfonyl)-β-D-threo-pentofuranosyl]-2-methoxy-5-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.




IT 50-89-5, Thymidine, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(Method for preparing fluorine-radiolabeled thymidine)
RN 50-89-5 CAPLUS
CN Thymidine (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



L5 ANSWER 5 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:523320 CAPLUS
DN 143:53487
TI Treatment of rheumatoid arthritis with hypoxia-inducible factor 1α antagonists
IN Defranoux, Nadine; Hurez, Vincent Jacques; Michelson, Seth G.; Shoda, Lisl Katharine; Wennerberg, Leif Gustaf
PA Entelos, Inc., USA
SO PCT Int. Appl., 72 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | WO 2005053744 | A1 | 20050616 | WO 2004-US39484 | 20041124 |
| | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| | RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| | AU 2004294950 | A1 | 20050616 | AU 2004-294950 | 20041124 |
| | US 2005148496 | A1 | 20050707 | US 2004-997764 | 20041124 |
| PRAI | US 2003-525363P | P | 20031126 | | |
| | WO 2004-US39484 | W | 20041124 | | |

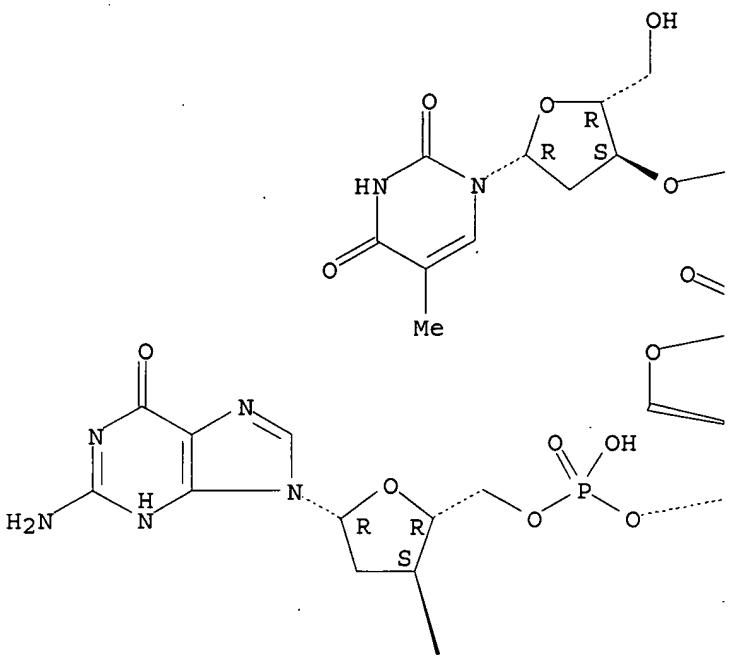
AB The invention encompasses a novel method of treating inflammatory disease, such as rheumatoid arthritis, and novel methods of identifying and screening for drugs useful in the treatment of inflammatory diseases and their clin. symptoms. The inventors have made the discovery that the activity of HIF-1α, a transcription regulator known to have an effect on some cancers, has a significant impact on the pathophysiol. of rheumatoid arthritis. The symptoms of an inflammatory disease, such as rheumatoid arthritis, may be alleviated by administering a compound that inhibits the activity of HIF-1α.

IT 853307-28-5
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(as hypoxia-responsive element HIF-1α binds to, in antagonist identification; treatment of rheumatoid arthritis with hypoxia-inducible factor 1α antagonists)

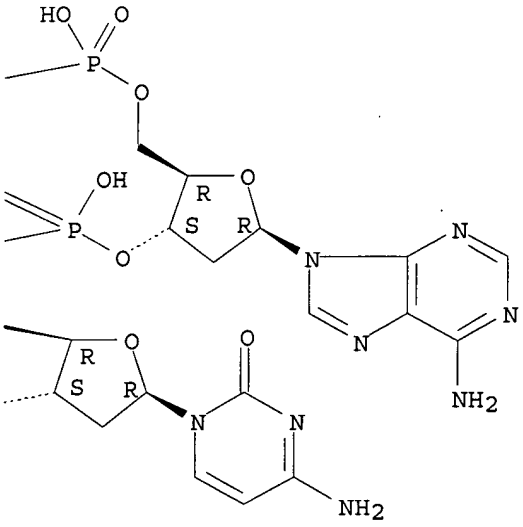
RN 853307-28-5 CAPLUS
CN Thymidine, thymidylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')-2'-deoxycytidylyl-(3'→5')-2'-deoxyguanylyl-(3'→5')-thymidylyl-(3'→5')-2'-deoxyguanylyl-(3'→5')-2'-deoxycytidylyl-(3'→5')- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

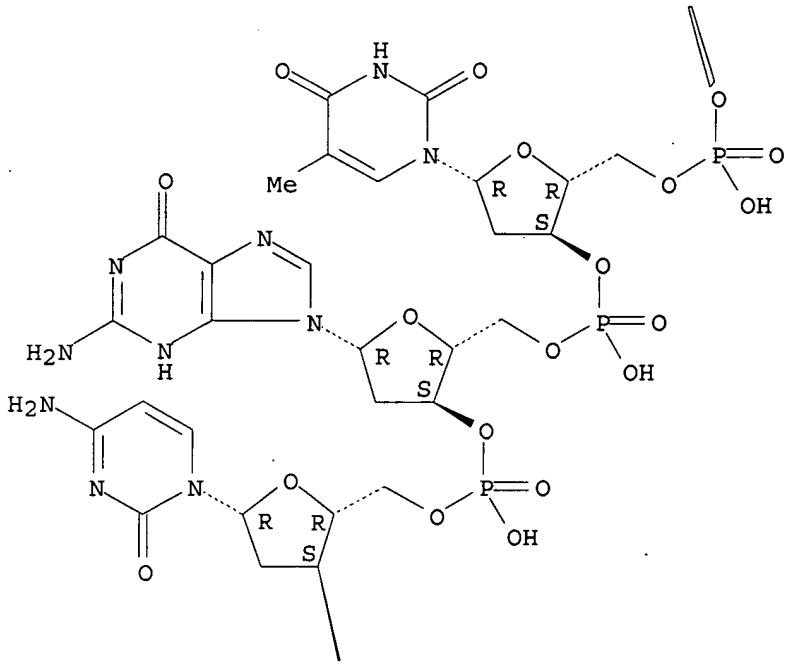
PAGE 1-A



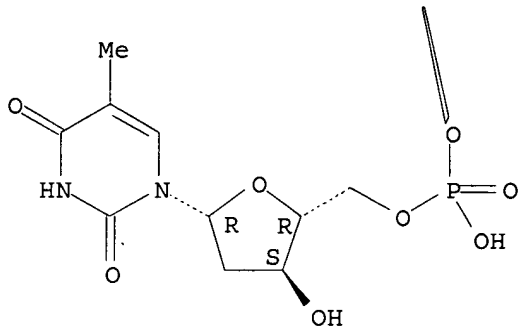
PAGE 1-B



PAGE 2-A



PAGE 3-A



RE.CNT 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 6 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:391290 CAPLUS
DN 143:111179
TI Base-Pairing, Tautomerism, and Mismatch Discrimination of 7-Halogenated 7-Deaza-2'-deoxyisoguanosine: Oligonucleotide Duplexes with Parallel and Antiparallel Chain Orientation
AU Seela, Frank; Peng, Xiaohua; Li, Hong
CS Laboratorium fuer Organische und Bioorganische Chemie, Institut fuer Chemie, Universitaet Osnabrueck, Osnabrueck, D-49069, Germany
SO Journal of the American Chemical Society (2005), 127(21), 7739-7751
CODEN: JACSAT; ISSN: 0002-7863
PB American Chemical Society
DT Journal
LA English
OS CASREACT 143:111179
AB Oligonucleotides containing 2'-deoxyisoguanosine (1, iGd), 7-deaza-2'-deoxyisoguanosine (2, c7iGd), and its 7-halogenated derivs. 3

and 4 were synthesized on solid phase using the phosphoramidite building blocks 5-7. The hybridization properties of oligonucleotides were studied on duplexes with parallel and antiparallel chain orientation. It was found that the 7-halogenated nucleoside analogs 3 and 4 enhance the duplex stability significantly in both parallel (ps) and antiparallel (aps) DNA. Moreover, the halogenated nucleosides shift the tautomeric keto-enol equilibrium strongly toward the keto form, with KTAUT [keto]/[enol] ≈ 104 coming close to that of 2'-deoxyguanosine (104-105), while the nonhalogenated 7-deaza-2'-deoxyisoguanosine 2 shows a KTAUT of around 2000 and the enol concentration of 1 is 10% in aqueous solution Consequently, nucleosides 3 and 4 show a much better mismatch discrimination against dT than compound 1 or 2 in antiparallel as well as in parallel DNA. 3 And 4 are expected to increase the selectivity of base incorporation opposite to isoCd in the form of triphosphates or in the polymerase-catalyzed reaction in comparison to 1 or 2.

IT 857065-03-3 857065-05-5 857065-07-7
857065-09-9
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(base-pairing, tautomerism, and mismatch discrimination of 7-halogenated 7-deaza-2'-deoxyisoguanosine)

RN 857065-03-3 CAPLUS

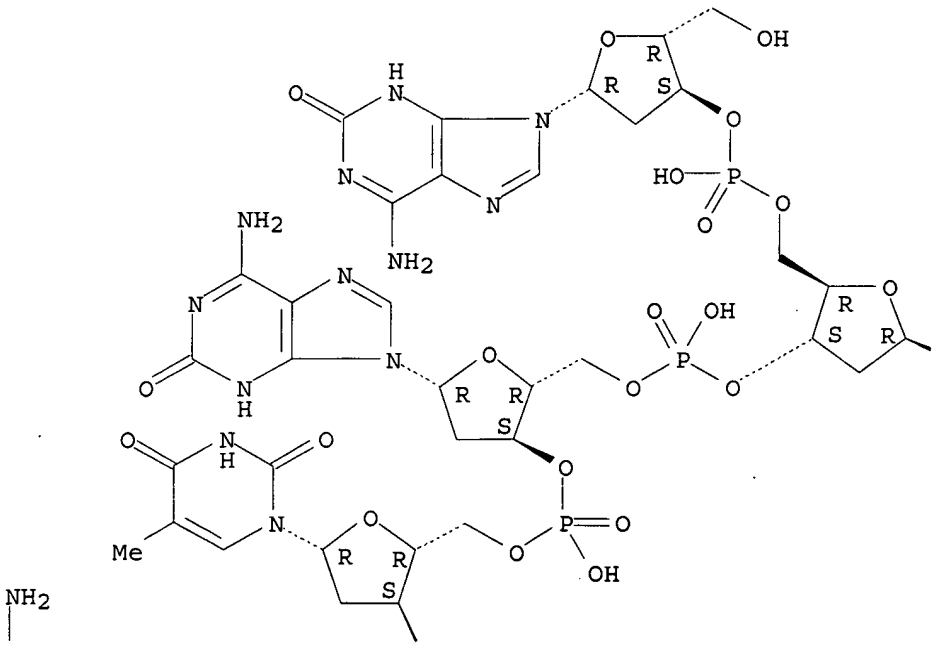
CN Adenosine, 2'-deoxycytidylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')-2'-deoxycytidylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')-2'-deoxycytidylyl-(3'→5')-2'-deoxy-, complex with 2'-deoxy-1,2-dihydro-2-oxoadenylyl-(3'→5')-thymidylyl-(3'→5')-2'-deoxy-1,2-dihydro-2-oxoadenylyl-(3'→5')-thymidylyl-(3'→5')-2'-deoxy-1,2-dihydro-2-oxoadenylyl-(3'→5')-thymidine (1:1) (9CI) (CA INDEX NAME)

CM 1

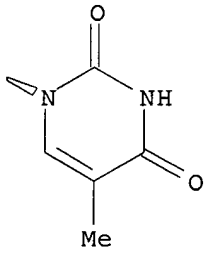
CRN 857065-02-2
CMF C60 H76 N21 O37 P5

Absolute stereochemistry.

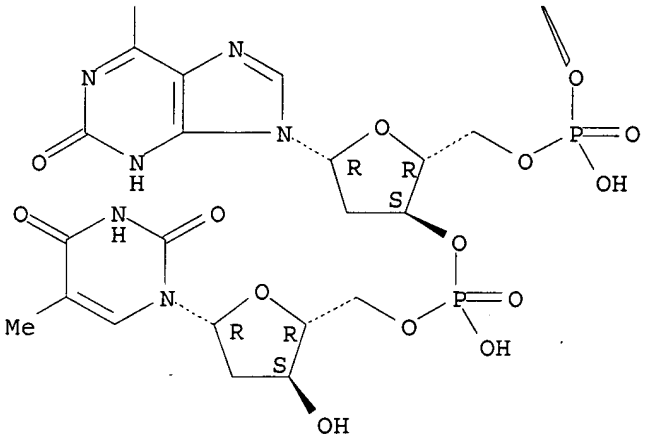




PAGE 1-B



PAGE 2-A

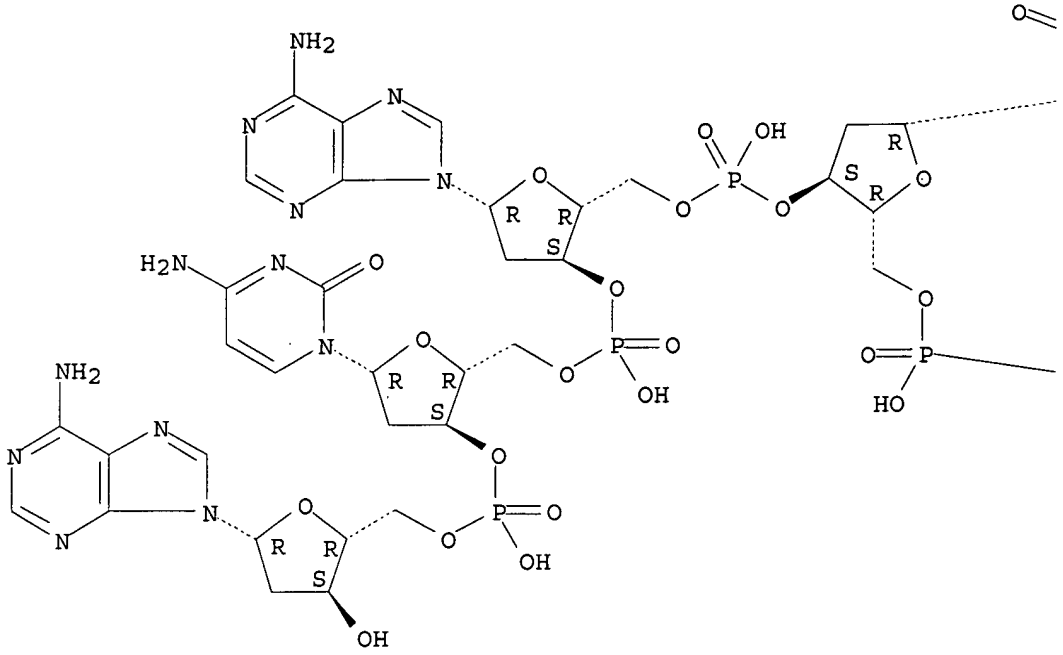


CM 2

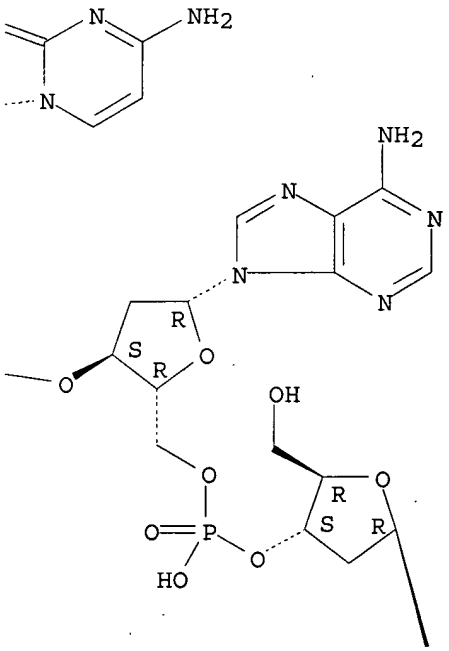
CRN 4418-19-3
CMF C57 H73 N24 O31 P5

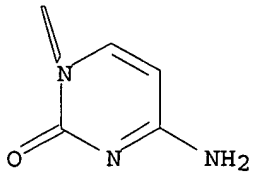
Absolute stereochemistry.

PAGE 1-A



PAGE 1-B





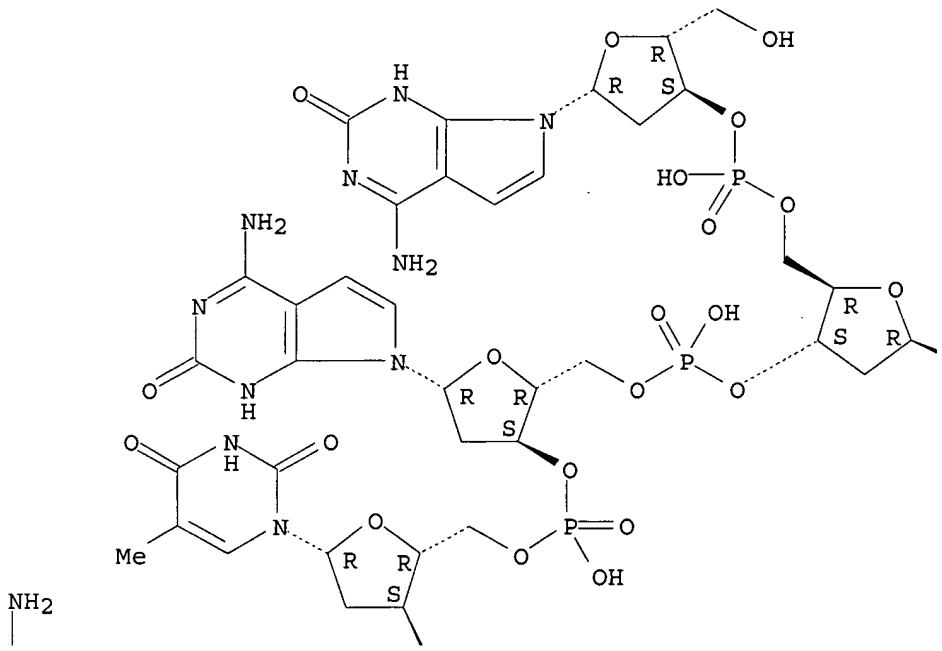
RN 857065-05-5 CAPLUS
CN Adenosine, 2'-deoxycytidylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')-2'-deoxycytidylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')-2'-deoxycytidylyl-(3'→5')-2'-deoxy-, complex with 2'-deoxy-1,2-dihydro-2-oxo-7-deazaadenylyl-(3'→5')-thymidylyl-(3'→5')-2'-deoxy-1,2-dihydro-2-oxo-7-deazaadenylyl-(3'→5')-thymidylyl-(3'→5')-2'-deoxy-1,2-dihydro-2-oxo-7-deazaadenylyl-(3'→5')-thymidine (1:1) (9CI) (CA INDEX NAME)

CM 1

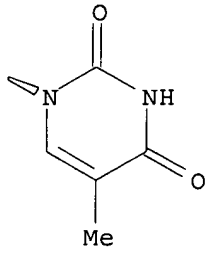
CRN 857065-04-4
CMF C63 H79 N18 O37 P5

Absolute stereochemistry.

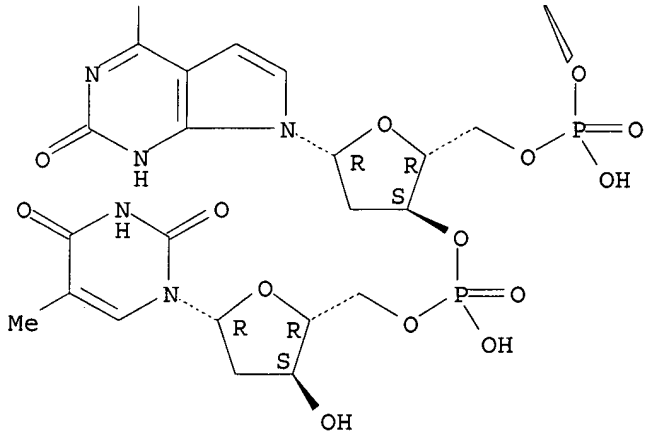




PAGE 1-B



PAGE 2-A

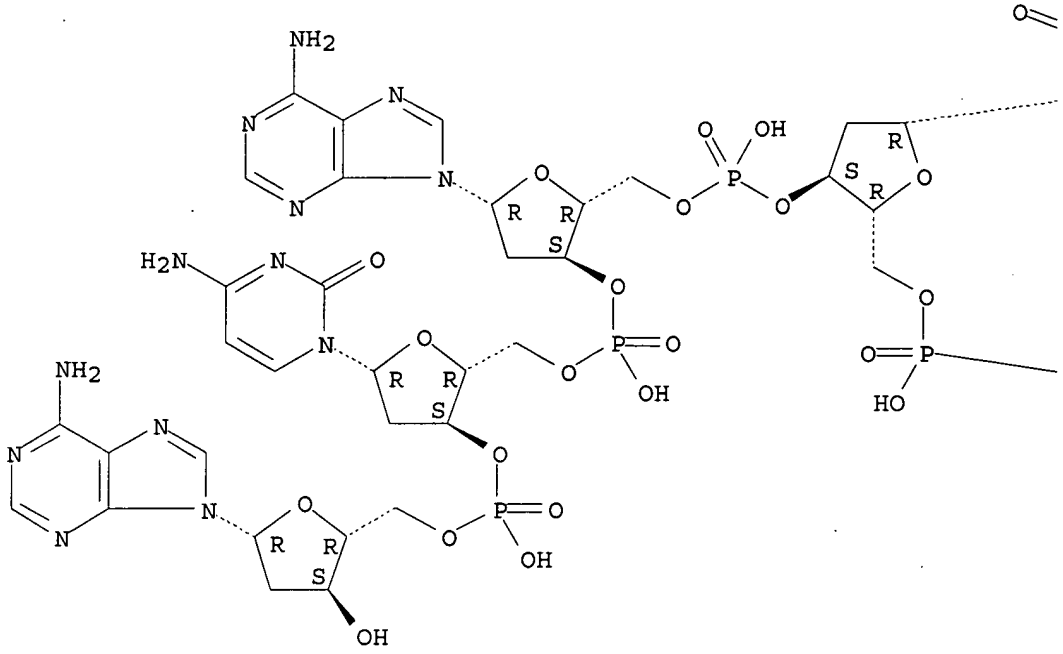


CM 2

CRN 4418-19-3
CMF C57 H73 N24 O31 P5

Absolute stereochemistry.

PAGE 1-A



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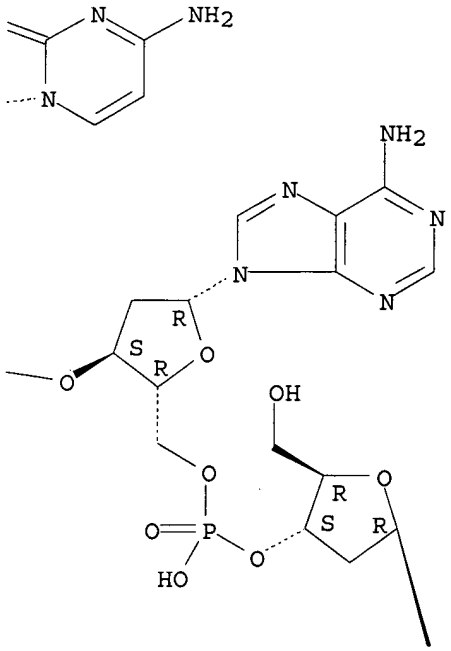
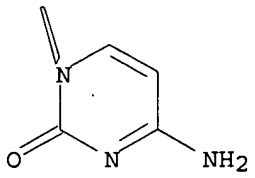


PAGE 2-B



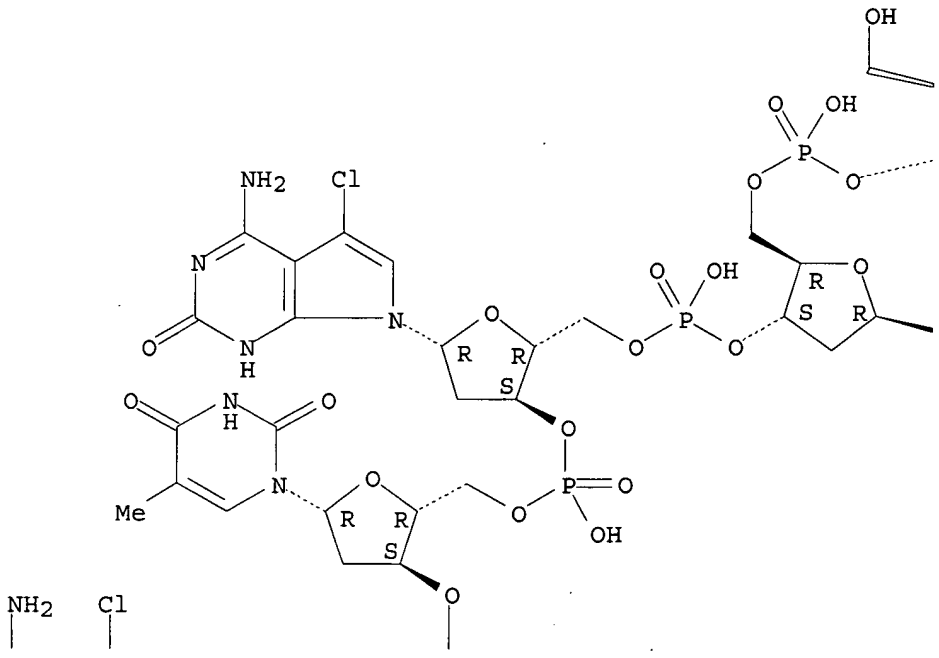
RN 857065-07-7 CAPLUS
CN Adenosine, 2'-deoxycytidylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')-2'-deoxycytidylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')-2'-deoxycytidylyl-(3'→5')-2'-deoxy-, complex with 7-chloro-2'-deoxy-1,2-dihydro-2-oxo-7-deazaadenylyl-(3'→5')-thymidylyl-(3'→5')-7-chloro-2'-deoxy-1,2-dihydro-2-oxo-7-deazaadenylyl-(3'→5')-thymidylyl-(3'→5')-7-chloro-2'-deoxy-1,2-dihydro-2-oxo-7-deazaadenylyl-(3'→5')-thymidine (1:1) (9CI) (CA INDEX NAME)

CM 1

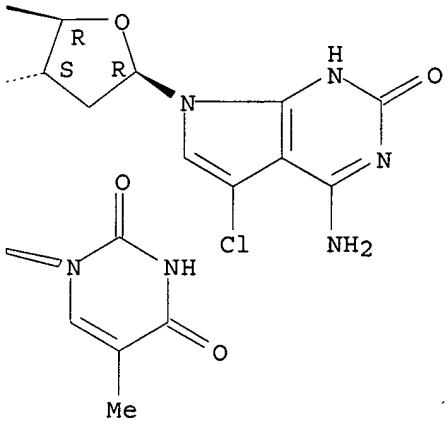
CRN 857065-06-6
CMF C63 H76 Cl3 N18 O37 P5

Absolute stereochemistry.

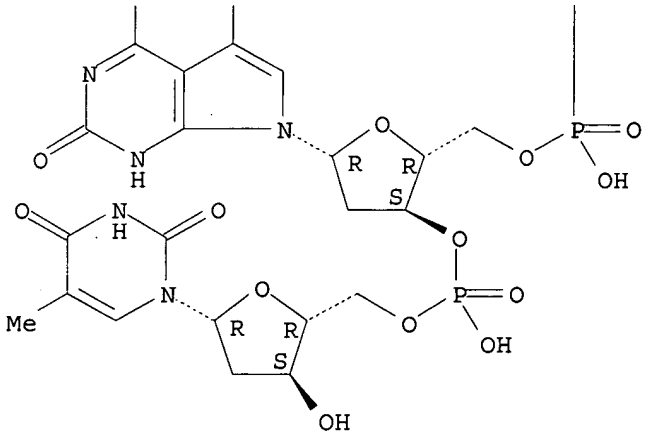
PAGE 1-A



PAGE 1-B



PAGE 2-A

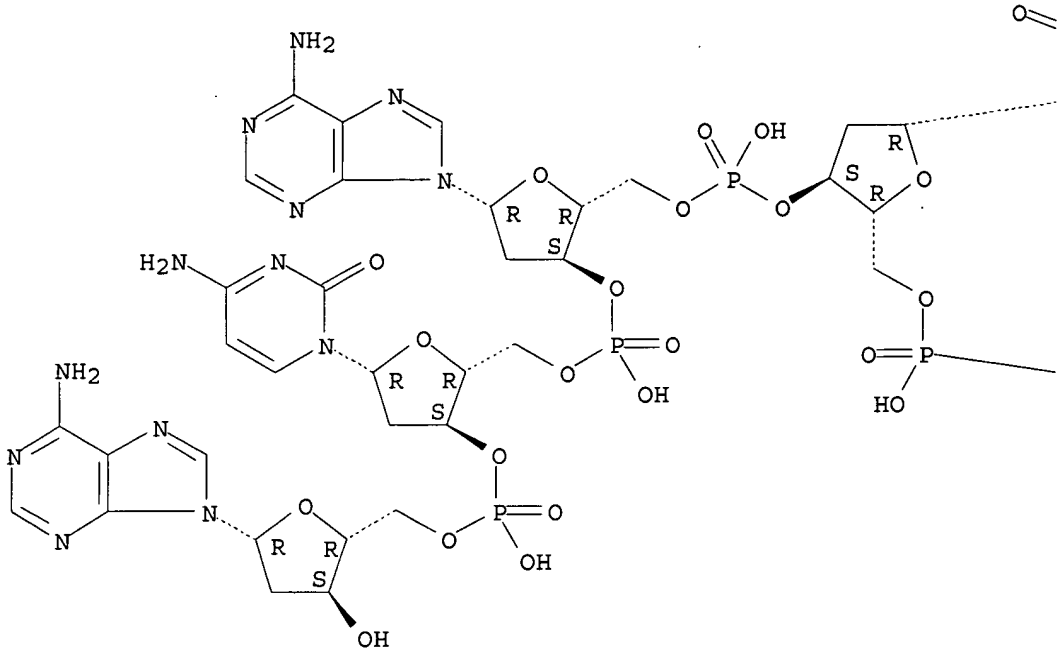


CM 2

CRN 4418-19-3
CMF C57 H73 N24 O31 P5

Absolute stereochemistry.

PAGE 1-A



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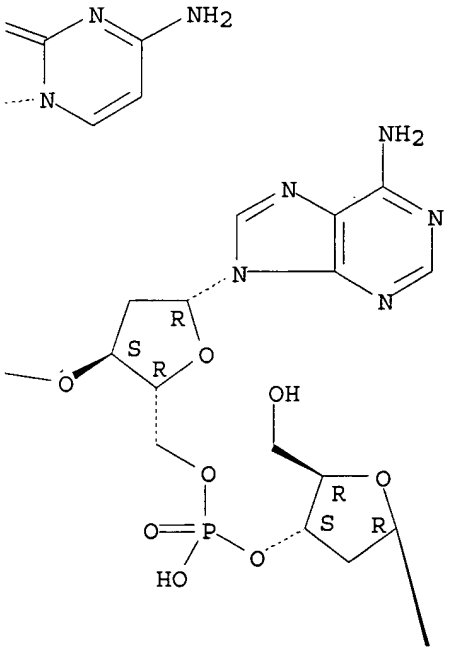
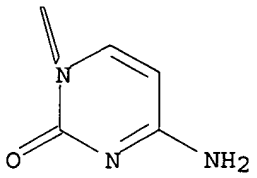




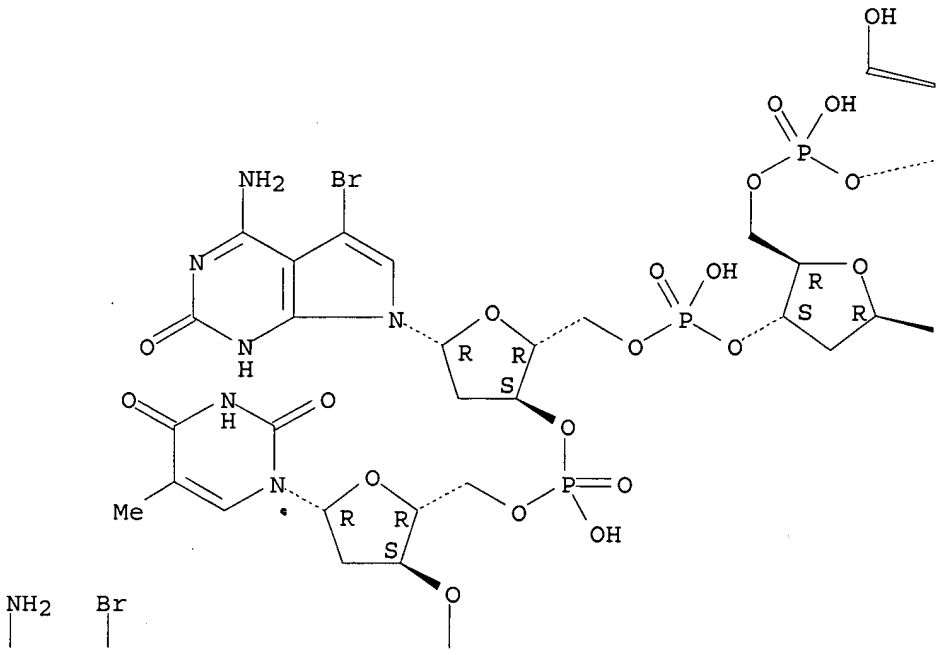
RN 857065-09-9 CAPLUS
CN Adenosine, 2'-deoxycytidylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')-2'-deoxycytidylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')-2'-deoxycytidylyl-(3'→5')-2'-deoxy-, complex with 7-bromo-2'-deoxy-1,2-dihydro-2-oxo-7-deazaadenylyl-(3'→5')-thymidylyl-(3'→5')-7-bromo-2'-deoxy-1,2-dihydro-2-oxo-7-deazaadenylyl-(3'→5')-thymidylyl-(3'→5')-7-bromo-2'-deoxy-1,2-dihydro-2-oxo-7-deazaadenylyl-(3'→5')-thymidine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 857065-08-8
CMF C63 H76 Br3 N18 O37 P5

Absolute stereochemistry.





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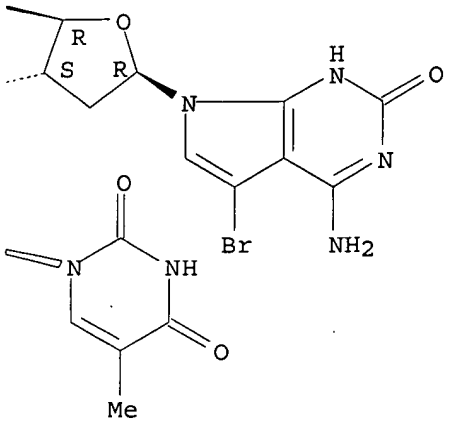
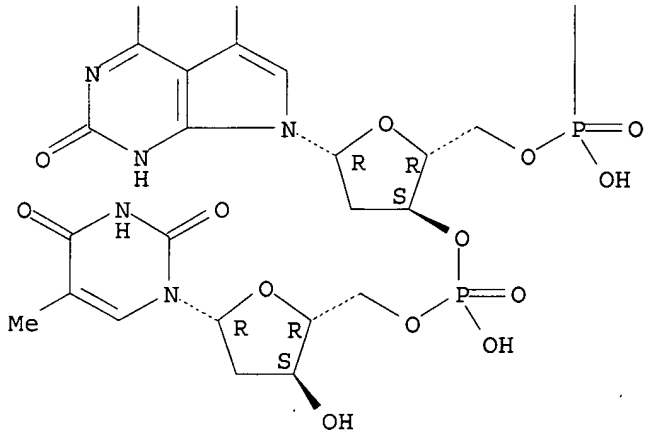


PAGE 2-A

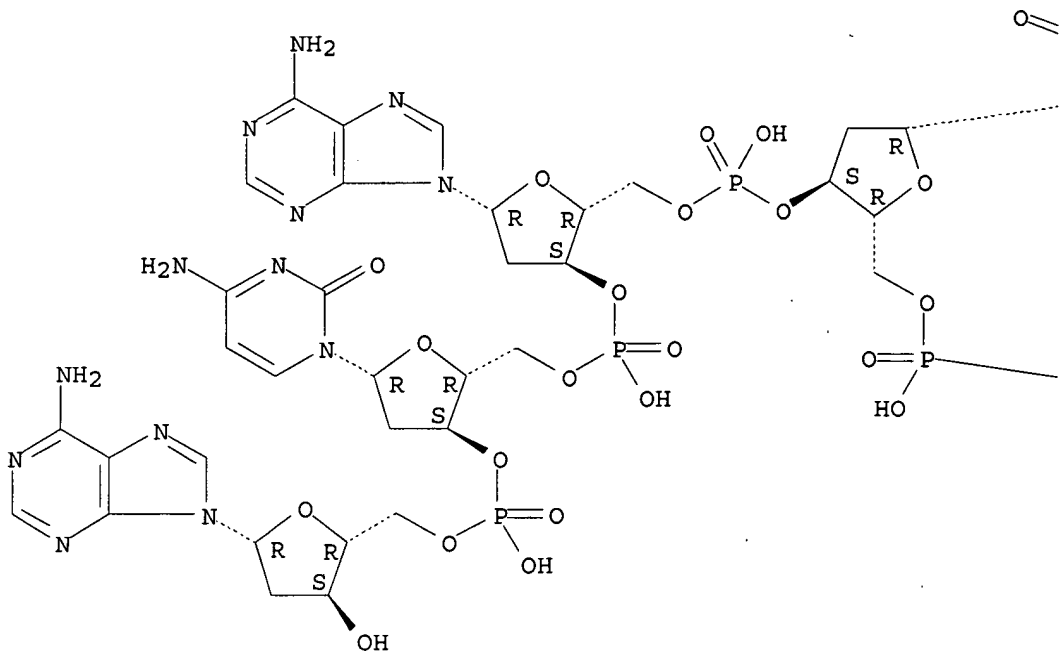


CM 2

CRN 4418-19-3
CMF C57 H73 N24 O31 P5

Absolute stereochemistry.

PAGE 1-A



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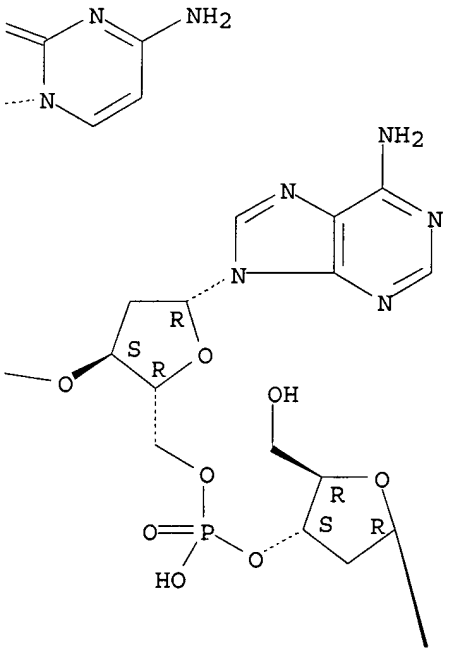
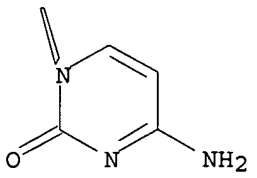
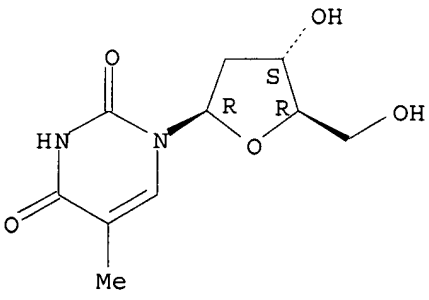




RE.CNT 59 THERE ARE 59 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 7 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:285249 CAPLUS
DN 144:51813
TI An ab initio DFT characteristics of tautomeric properties of hydroxyl radical modified nucleosides in polar and non-polar environments
AU Cysewski, Piotr
CS Department of Physical Chemistry, Collegium Medicum, Nicolaus Copernicus University, Bydgoszcz, 85-950, Pol.
SO Zeitschrift fuer Physikalische Chemie (Muenchen, Germany) (2005), 219(2), 213-234
CODEN: ZPCFAX; ISSN: 0942-9352
PB Oldenbourg Wissenschaftsverlag GmbH
DT Journal
LA English
AB DFT ab initio calcns. of 22 free radical derived nucleosides analogs were performed in gas phase and water solution Most of studied compds. exist mainly in expected amino- and keto- forms. However, there were found few important exceptions: enolamino tautomer of 2-OH-adenosine is dominant in apolar environment, while in polar solution keto-amino isomer become more probable; 8-oxo-guanosine is to be represented as a mixture of two tautomers: 6,8-diketo and 6-enol-8-keto with disfavoring of the latter in polar conditions, 5-OH-cytidine adopts imino-keto form in non-polar surroundings but water stabilizes amino-keto isomer reverting order of these tautomers, cytidine glycol in apolar and polar conditions is represented mainly by keto-imino form, but more polar environment increase percentage of amino-keto tautomer not reverting their order, 6-hydroxy-5,6-dihydroxy-cytidine in both polar and non-polar conditions adopts keto-imino form, which dominates over keto-amino one, 5-hydroxy-5,6-dihydro-cytosine in non-polar conditions exists as keto-imino tautomer while polar conditions favors keto-amino form.
IT 50-89-5, Thymidine, properties
RL: PRP (Properties)
(ab initio DFT characteristics of tautomeric properties of hydroxyl radical modified nucleosides in polar and non-polar environments)
RN 50-89-5 CAPLUS
CN Thymidine (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



RE.CNT 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 8 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:702066 CAPLUS
DN 141:238640
TI Effect of transcription factor Hes1 on differentiation of hematopoietic stem-progenitor cells and uses in tumor immunity
IN Civin, Curt I.; Yu, Xiaobing
PA Johns Hopkins University School of Medicine, USA
SO PCT Int. Appl., 73 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | WO 2004072264 | A2 | 20040826 | WO 2004-US4085 | 20040212 |
| | WO 2004072264 | A3 | 20050519 | | |

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RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

| | | | |
|---|---|---|---|
| PRAI | US 2003-446939P | P | 20030212 |
| | US 2003-498739P | P | 20030828 |

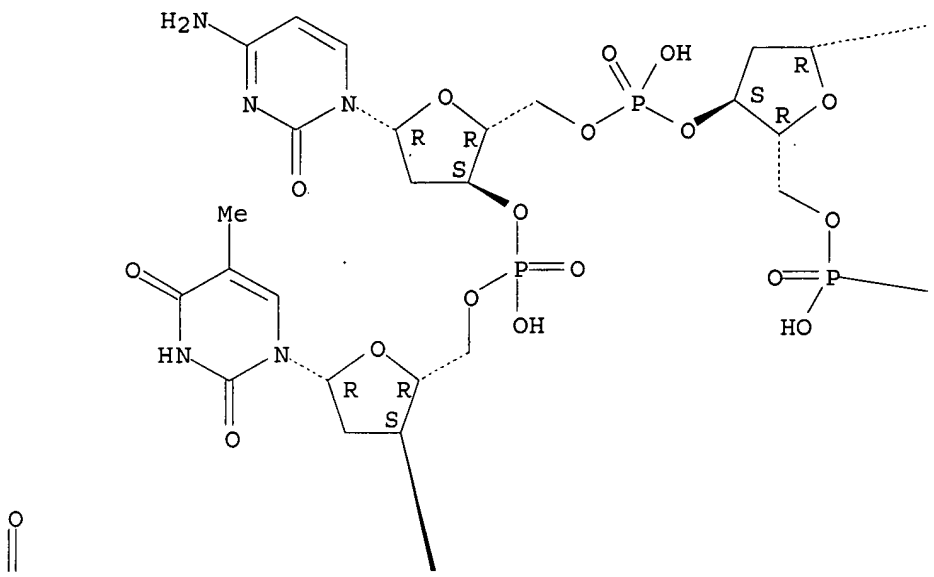
AB The invention is based at least in part on the discovery that overexpression of a transcription factor, Hes1 promotes the differentiation of hematopoietic stem cells (HSCs) to various cell types, including but not limited to monocyte-macrophages and dendritic cells. Addnl., modulating the expression of Hes1 so that Hes1 is over- or under-expressed appears to promote the differentiation of HSCs to neurons or glial cells, resp. Thus, the present invention features methods of differentiating isolated hematopoietic stem cells, that were isolated from either bone marrow (BM), cord blood (CB), peripheral blood (PBSC) or non-mobilized blood. Constitutive expression of Hes1 in CD34+ cell cultures increased monocyte-macrophages and decreased other cell types, including CD34+. Hes1-transduced HSCs proliferated in vitro, but more slowly than control HSCs, and Hes1-transduction did not increase apoptosis. Hes1 expression induced monocyte-macrophage differentiation of CD34 + cell subsets and over-expression of Hes1 favored monocyte-macrophage differentiation and suppressed erythroid differentiation. Hes1 transduction blocked hematopoietic colony formation by human CD34+ cells. Hes1 transduction induced PU.1 expression.

IT 146622-98-2 748789-49-3
RL: PRP (Properties)
(unclaimed sequence; effect of transcription factor Hes1 on differentiation of hematopoietic stem-progenitor cells and uses in tumor immunity)

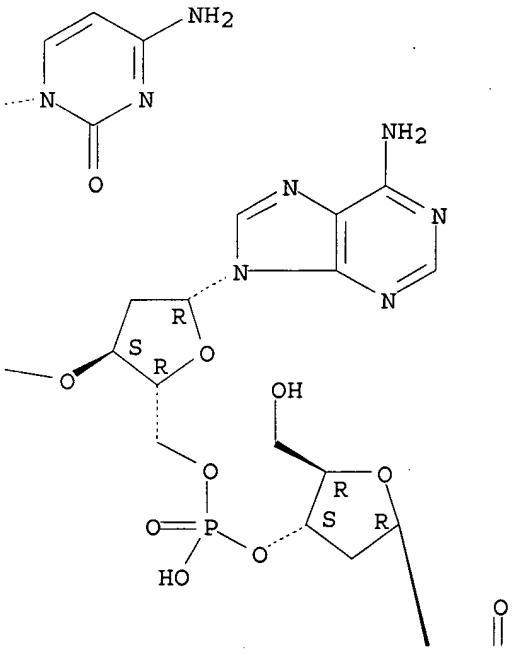
RN 146622-98-2 CAPLUS
CN Guanosine, 2'-deoxycytidylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')-2'-deoxycytidylyl-(3'→5')-2'-deoxycytidylyl-(3'→5')-thymidylyl-(3'→5')-2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

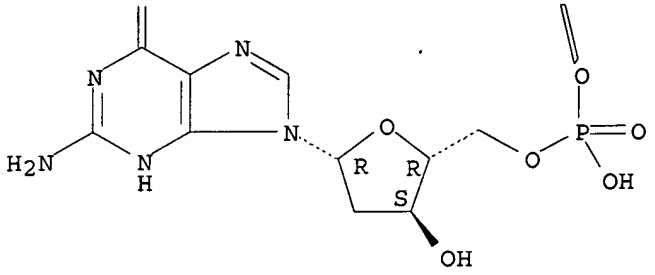
PAGE 1-A



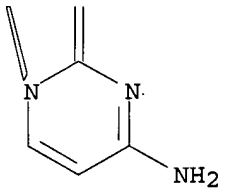
PAGE 1-B



PAGE 2-A



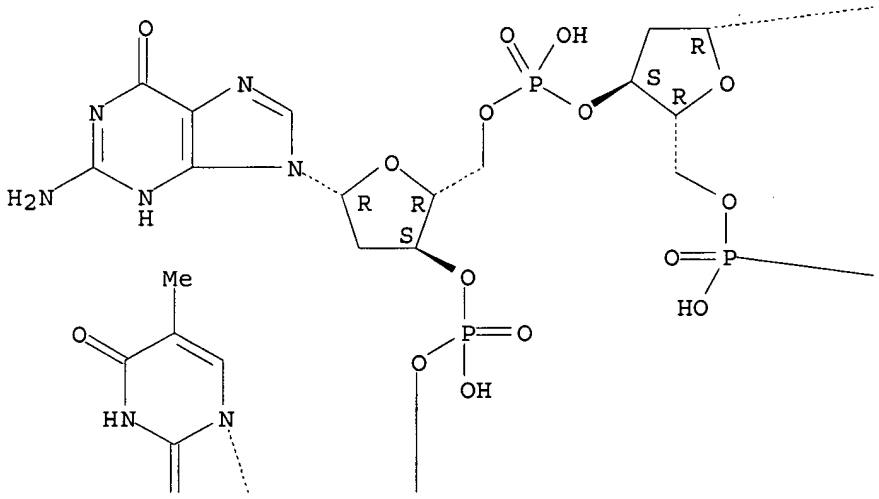
PAGE 2-B



RN 748789-49-3 CAPLUS
CN Guanosine, 2'-déoxycytidylyl-(3'→5')-thymidylyl-(3'→5')-thymidylyl-(3'→5')-2'-deoxyguanylyl-(3'→5')-thymidylyl-(3'→5')-2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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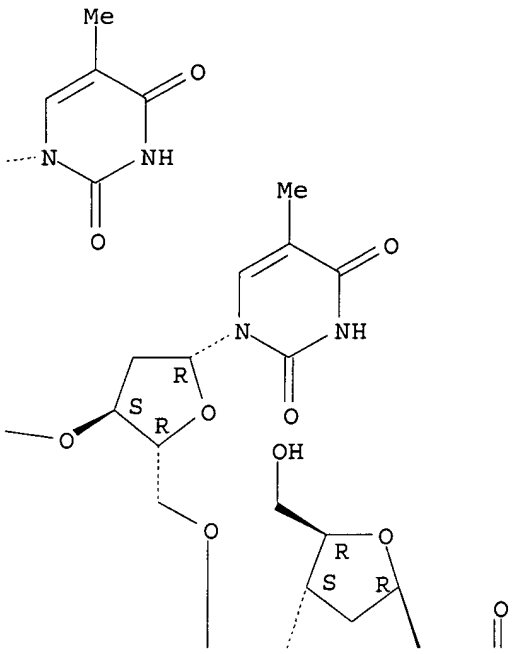

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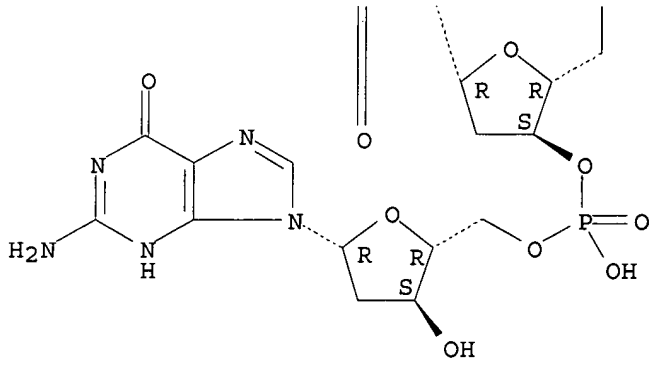

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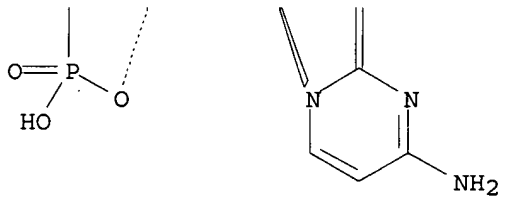

L5 ANSWER 9 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:220487 CAPLUS
DN 140:248197
TI Methods for tissue-specific inhibition of gene expression using siRNA for use in therapy
IN Allen, Danny; Farrar, Gwyneth Jane

PA Provost, Fellows and Scholars of the College of the Holy and Undivided Trinity of Queen Elizabeth Near Dublin, Ire.; Bateson, John

SO PCT Int. Appl., 66 pp.
CODEN: PIXXD2
DT Patent
LA English

FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
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| PI WO 2004022782 | A2 | 20040318 | WO 2003-GB3816 | 20030904 |
| WO 2004022782 | A3 | 20040429 | | |
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| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| CA 2497892 | AA | 20040318 | CA 2003-2497892 | 20030904 |
| AU 2003264727 | A1 | 20040329 | AU 2003-264727 | 20030904 |
| US 2004198967 | A1 | 20041007 | US 2003-655570 | 20030904 |
| EP 1534832 | A2 | 20050601 | EP 2003-793875 | 20030904 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | | |
| PRAI US 2002-408210P | P | 20020904 | | |
| WO 2003-GB3816 | W | 20030904 | | |

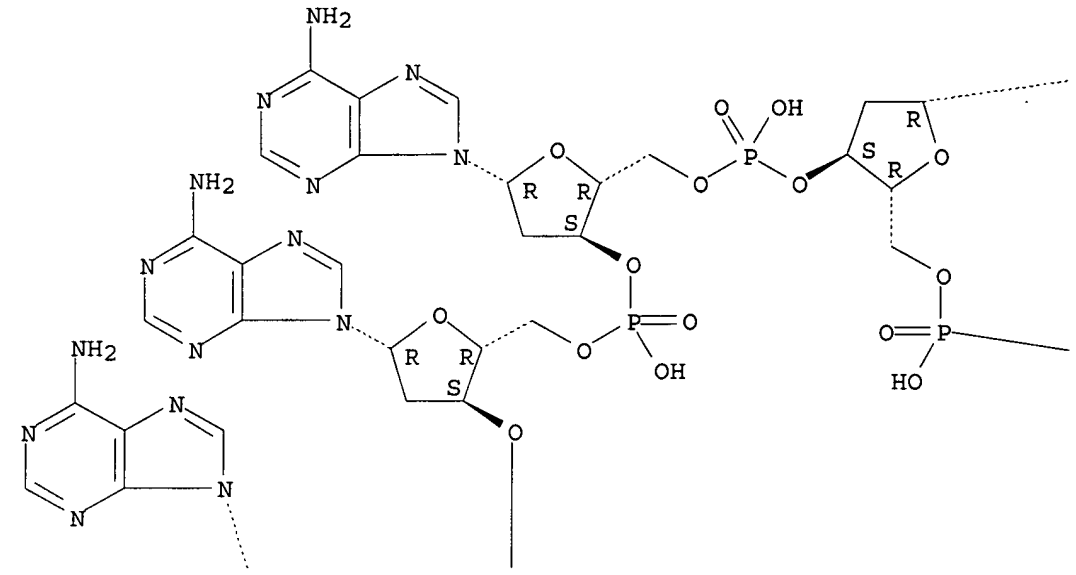
AB The present invention provides methods for tissue-specific inhibition of gene expression using siRNA for use in therapy. These siRNA-expressing constructs may be used in drug screening for retinitis pigmentosa, epidermolysis bullosa, osteogenesis imperfecta, Ehlers-Danlos syndrome, Marfan's disease, dominant neg. cancer, Alzheimer's disease, motor neuron disease, polycystic kidney disease or disorder due to polyglutamine expansions such as Huntington's disease.

IT 90966-12-4
RL: PRP (Properties)
(unclaimed sequence; methods for tissue-specific inhibition of gene expression using siRNA for use in therapy)

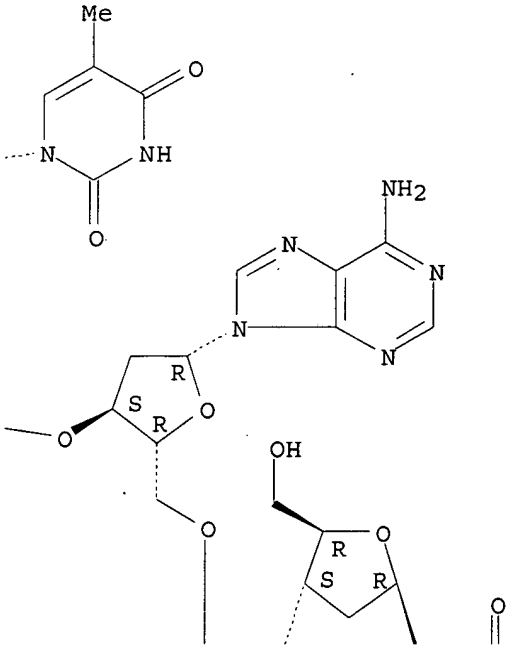
RN 90966-12-4 CAPLUS

CN Adenosine, thymidylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')-thymidylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')-2'-deoxy- (9CI) (CA INDEX NAME)

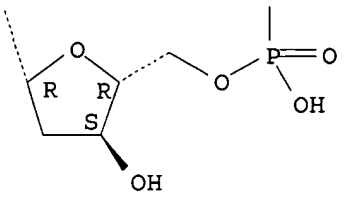
Absolute stereochemistry.



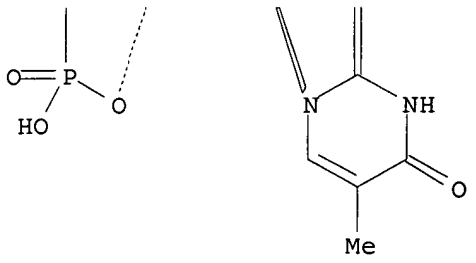




PAGE 2-A



PAGE 2-B



L5 ANSWER 10 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:80827 CAPLUS
DN 140:140655
TI Genetic engineering of transgenes to avoid gene silencing in plants, application to 5-enolpyruvyl-3-phosphishikimate synthase (EPSPS) gene conferring glyphosate resistance, and uses thereof
IN Flasinski, Stanislaw
PA Monsanto Technology Llc, USA
SO PCT Int. Appl., 162 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | WO 2004009761 | A2 | 20040129 | WO 2003-US21551 | 20030710 |
| | WO 2004009761 | A3 | 20040729 | | |
| | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| | RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| | CA 2492407 | AA | 20040129 | CA 2003-2492407 | 20030710 |
| | AU 2003247962 | A1 | 20040209 | AU 2003-247962 | 20030710 |
| | BR 2003012771 | A | 20050503 | BR 2003-12771 | 20030710 |
| | EP 1551966 | A2 | 20050713 | EP 2003-765524 | 20030710 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | | |
| | CN 1681923 | A | 20051012 | CN 2003-822167 | 20030710 |
| PRAI | US 2002-396665P | P | 20020718 | | |
| | WO 2003-US21551 | W | 20030710 | | |

AB The invention claims genetic engineering methods and artificial polynucleotide sequences for providing agronomically useful phenotypes, including herbicide tolerance, insect resistance, increased yield, and

disease resistance, to plants. The materials and methods disclosed provide for polynucleotide mols. sufficiently divergent from polynucleotides naturally contained in plants, or polynucleotides previously introduced into plants as transgenes to permit trait stacking in plant breeding methods or plant transformation methods. The disclosure also provides for methods and compns., including PCR primers, to detect the polynucleotides of the invention in plants. Specifically, the invention claims polynucleotide sequences for glyphosate-resistant 5-enolpyruvyl -3-phosphoshikimate synthases (EPSPS) that were modified for expression in Arabidopsis, corn, and soybean. The invention also claims polynucleotide sequences for gene bar phosphinothricin acetyltransferase that were modified for expression in Arabidopsis or corn. Heterologous genes that normally express well as transgenes may experience gene silencing when there is more than one copy in the same plant, when a transgene is too similar to an endogenous gene DNA sequence, when transgenic plants are crossed to other transgenic plants, or when a transgenic plant is retransformed with a plant expression cassette. Genes encoding 5-enolpyruvyl-3-phosphishikimate synthase (EPSPS) variants or enzymes that degrade glyphosate in plant tissues are used for the prodn. of transgenic crops that are tolerant to glyphosate, thereby allowing glyphosate to be used for effective weed control. Transgenes for tolerance to other herbicides, for example gene bar, are also useful as selectable markers or scorable markers in plant breeding.

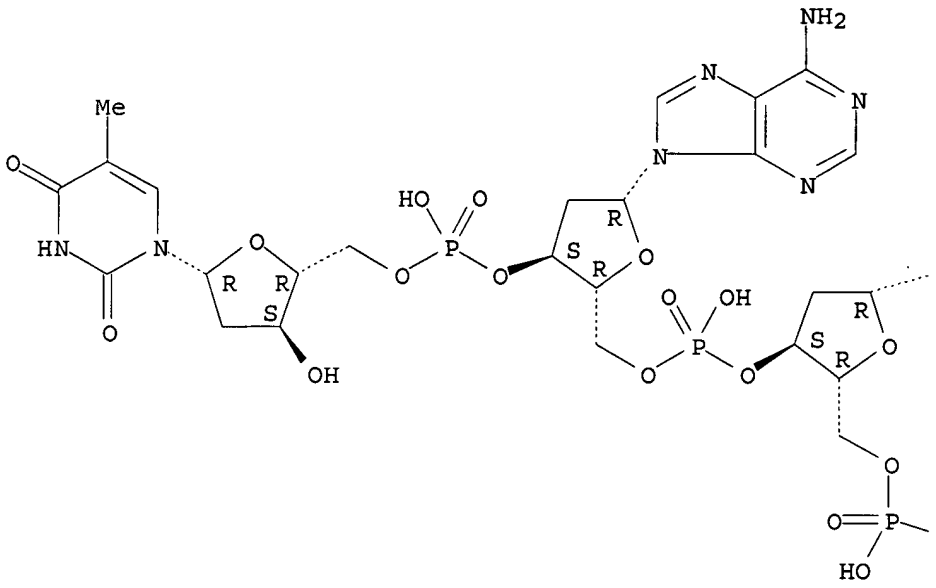
IT 108273-79-6 116934-33-9 130604-67-0
133151-49-2 133151-50-5 133151-51-6
133151-52-7 133151-53-8 133151-54-9
133151-55-0 133151-56-1 133151-57-2
133151-58-3 133151-59-4 133164-67-7
133177-35-2 133177-36-3 176328-79-3
179267-47-1 249277-96-1 651770-05-7
651770-06-8 651770-07-9 651770-08-0
RL: PRP (Properties)
(unclaimed sequence; genetic engineering of transgenes to avoid gene silencing in plants, application to 5-enolpyruvyl -3-phosphishikimate synthase (EPSPS) gene conferring glyphosate resistance, and uses thereof)

RN 108273-79-6 CAPLUS

CN Thymidine, 2'-deoxyadenylyl-(3'→5')-thymidylyl-(3'→5')-thymidylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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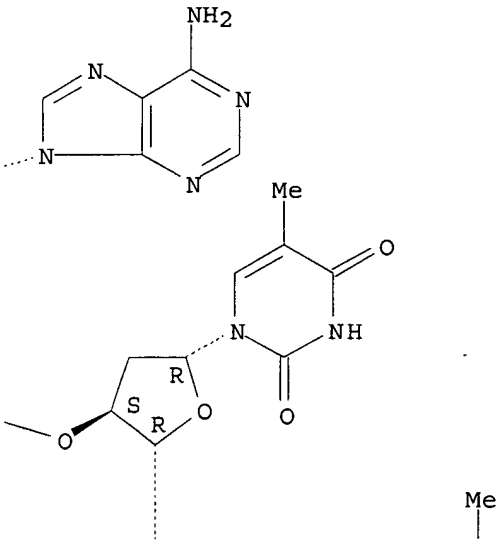
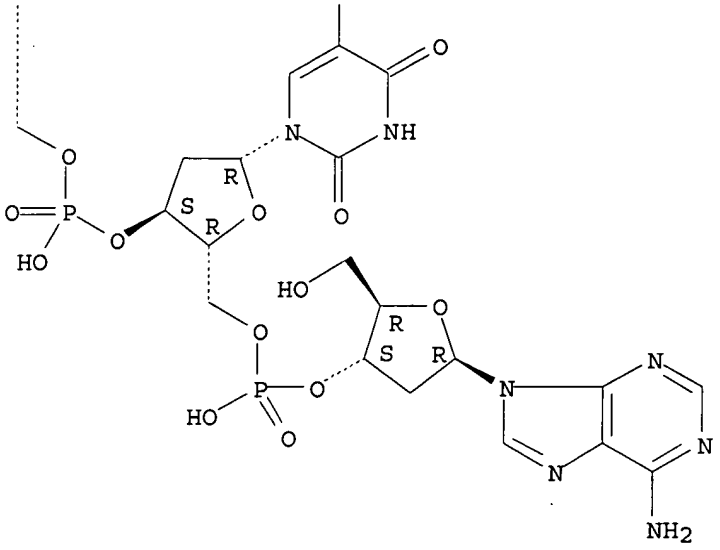
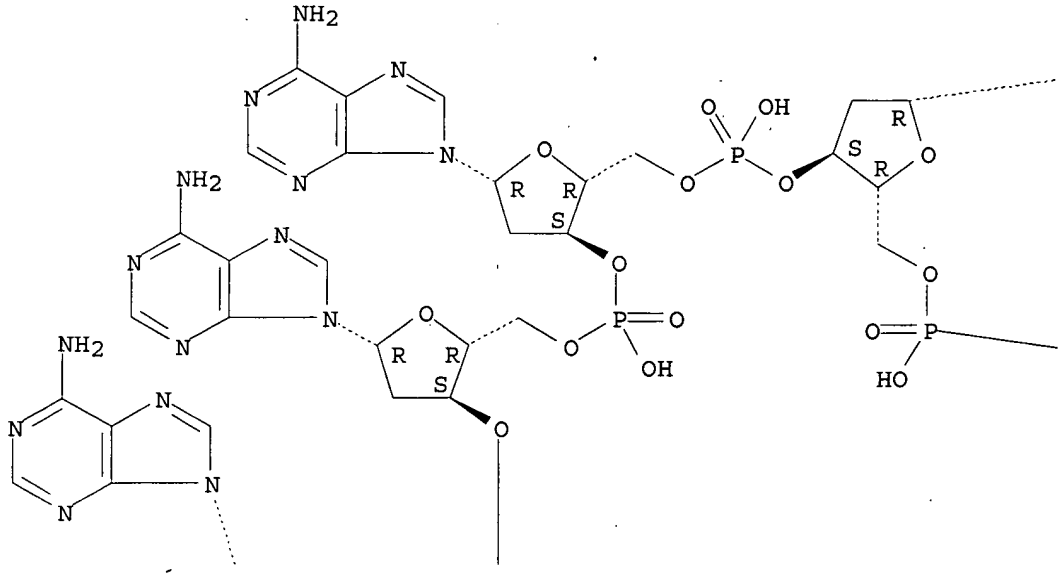




RN 116934-33-9 CAPLUS
CN Adenosine, 2'-deoxyadenylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')-thymidylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')-2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.





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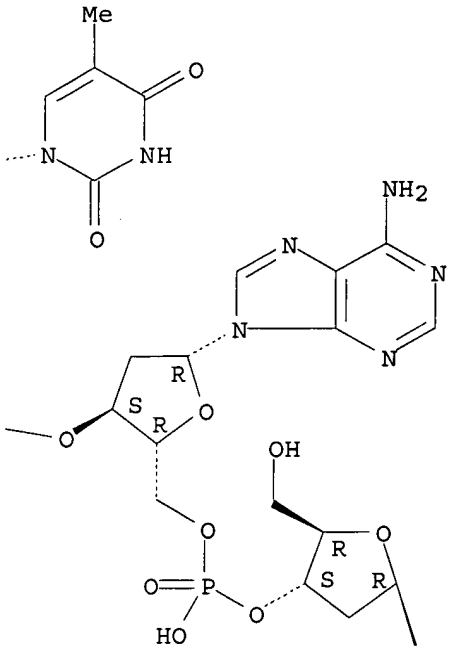

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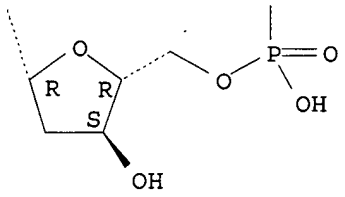

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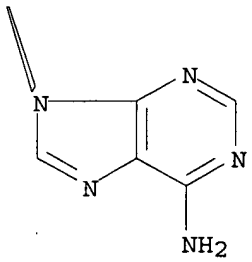

RN 130604-67-0 CAPLUS
CN Thymidine, 2'-deoxyguanylyl-(3'→5')-thymidylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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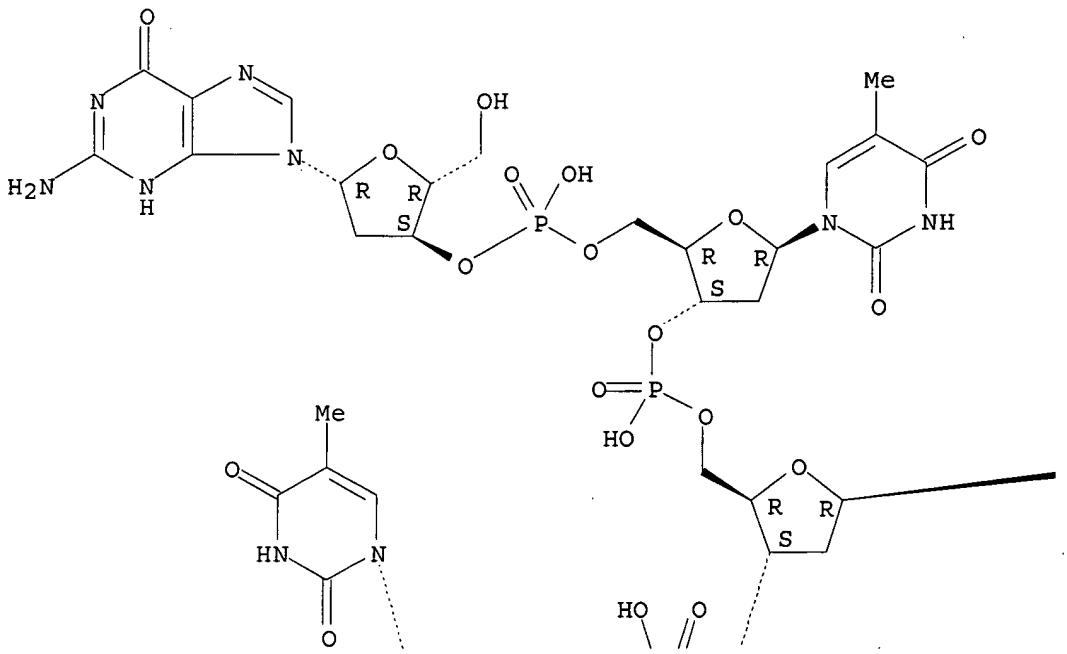

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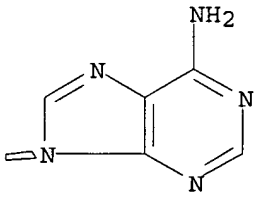

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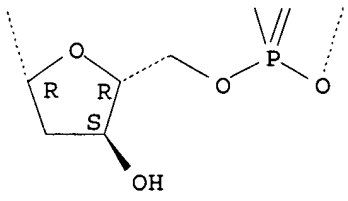

RN 133151-49-2 CAPLUS

CN Adenosine, 2'-deoxyadenylyl-(3'→5')-thymidylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')-thymidylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')-2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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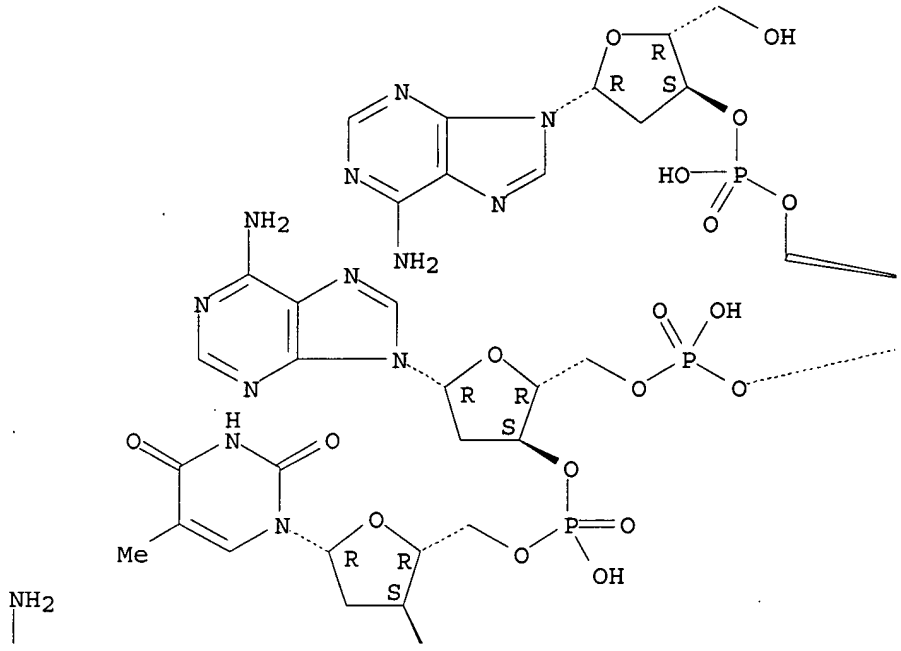

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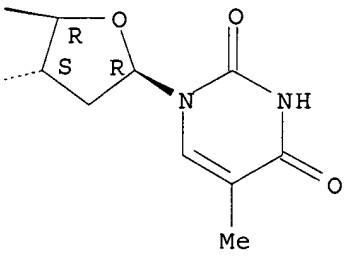
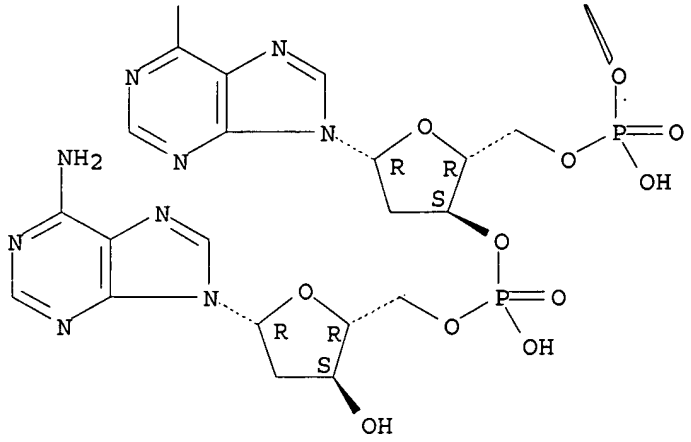
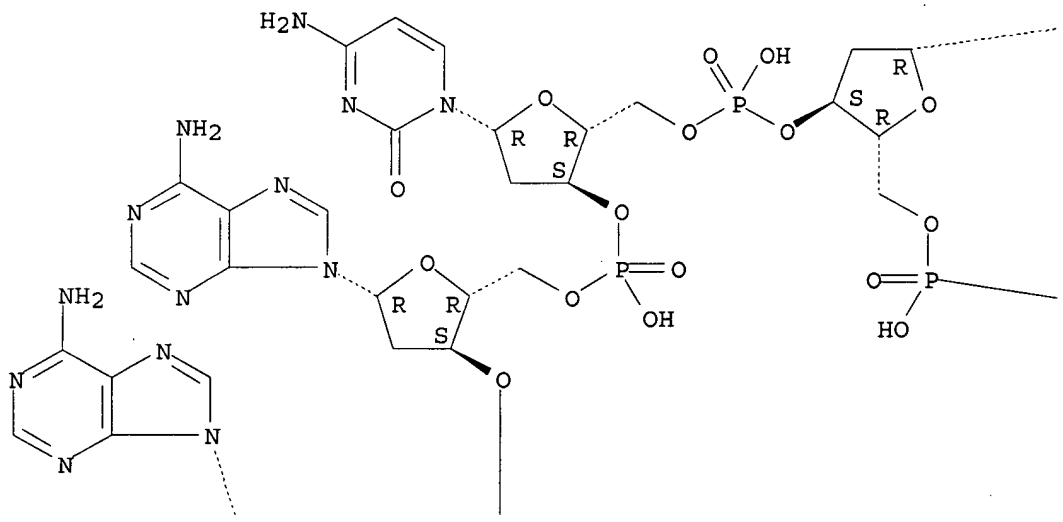




RN 133151-50-5 CAPLUS
CN Adenosine, 2'-deoxyadenylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')-thymidylyl-(3'→5')-2'-deoxycytidylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')-2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.





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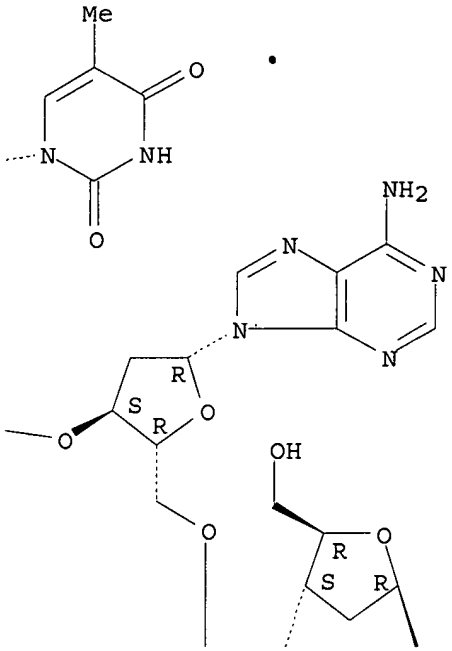

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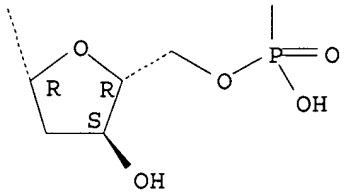

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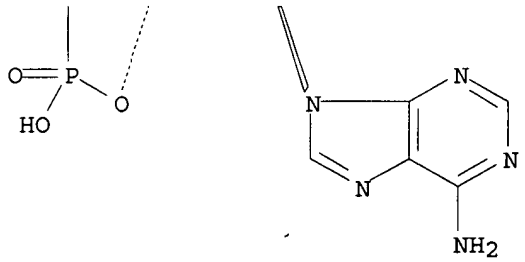

RN 133151-51-6 CAPLUS
CN Adenosine, 2'-deoxyadenylyl-(3'→5')-thymidylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')-2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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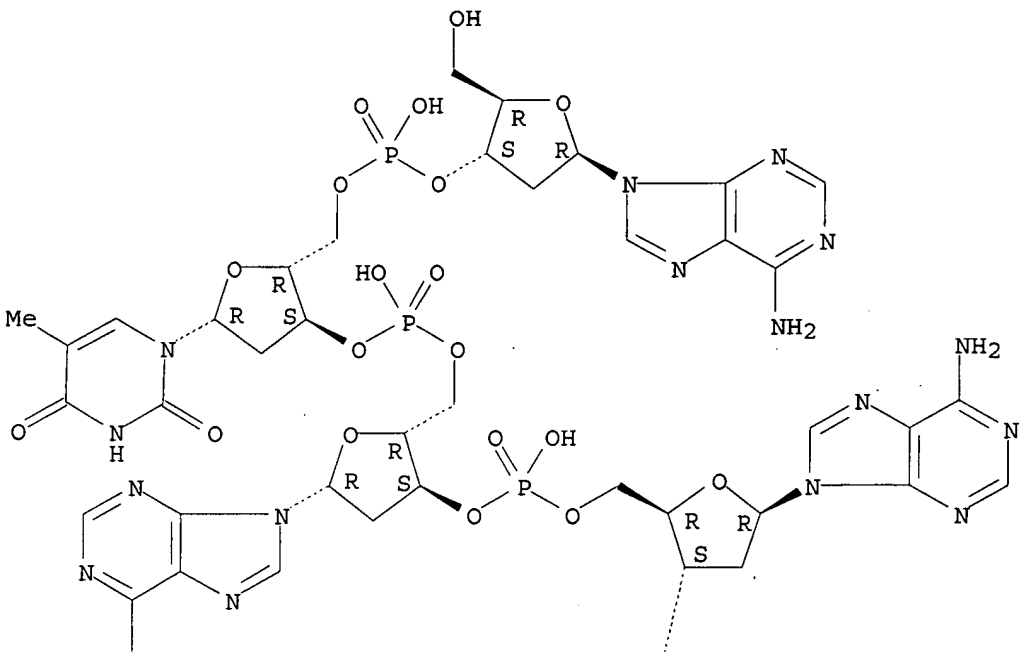

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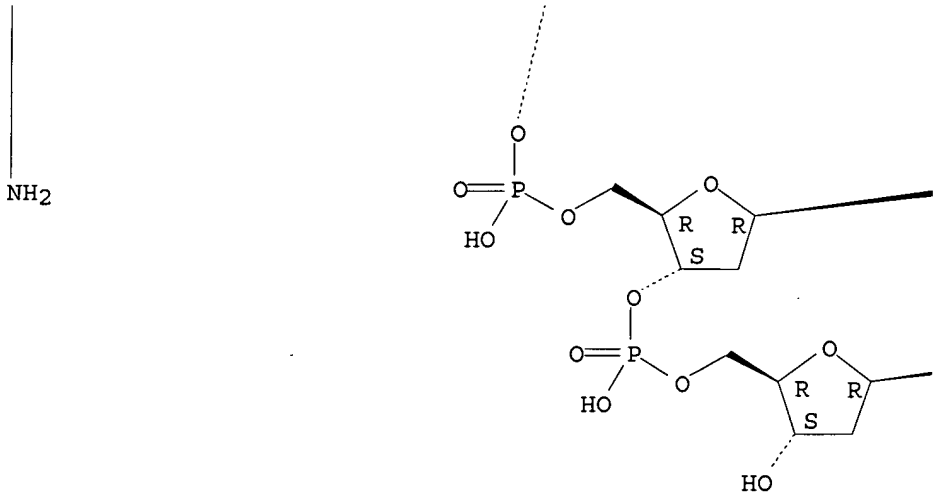
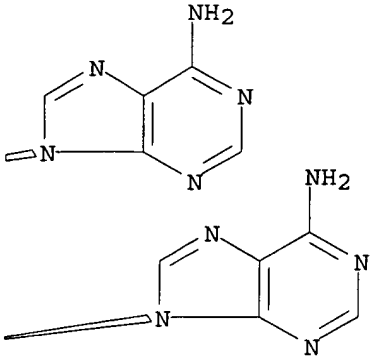
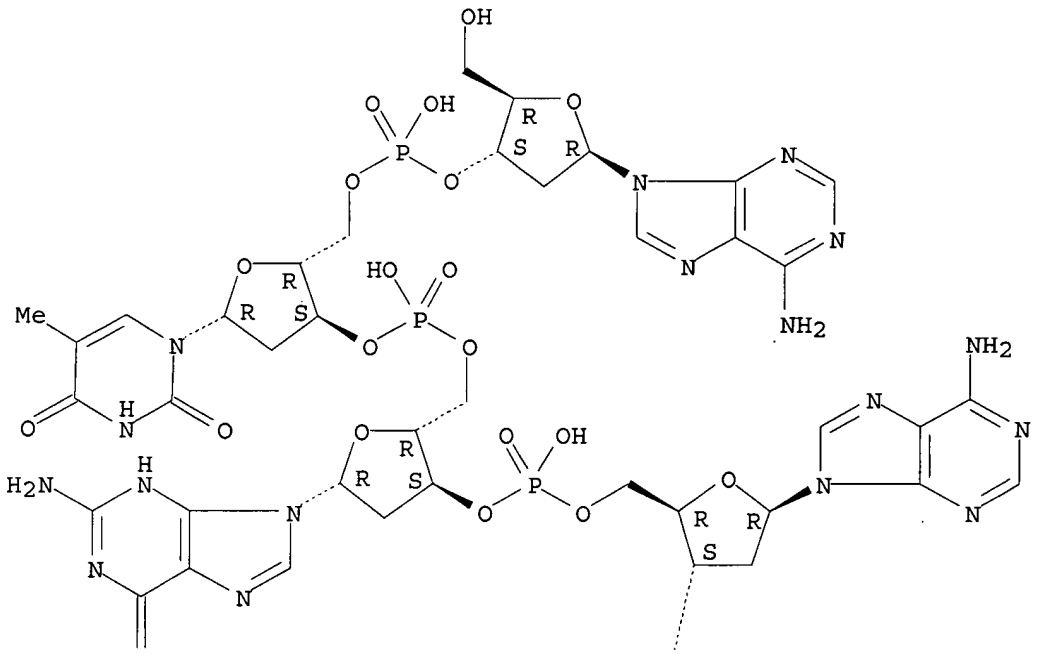




RN 133151-52-7 CAPLUS
CN Adenosine, 2'-deoxyadenylyl-(3'→5')-thymidylyl-(3'→5')-2'-deoxyguanylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')-2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.





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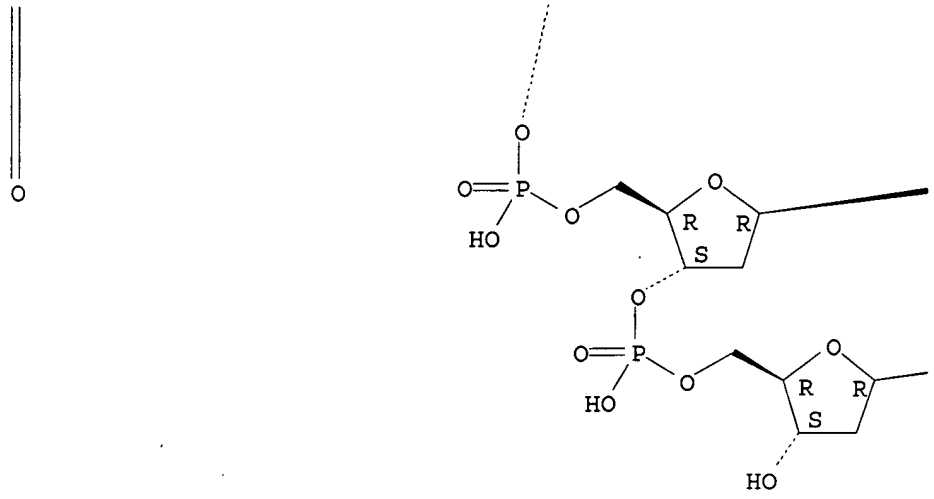

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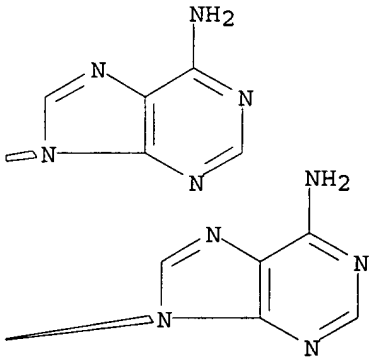

RN 133151-53-8 CAPLUS
CN Thymidine, 2'-deoxyadenylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')-2'-deoxyguanylyl-(3'→5')-2'-deoxycytidylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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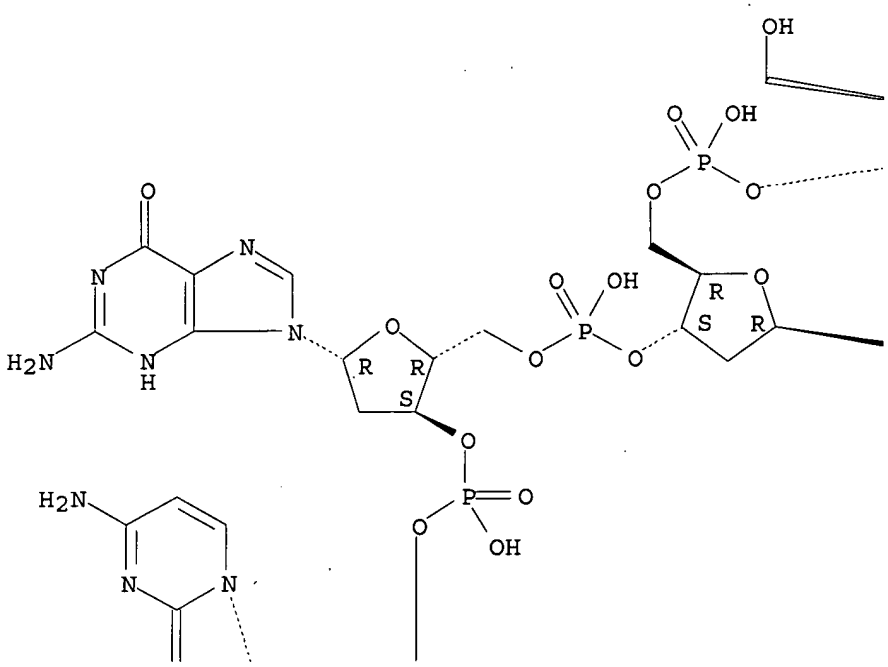

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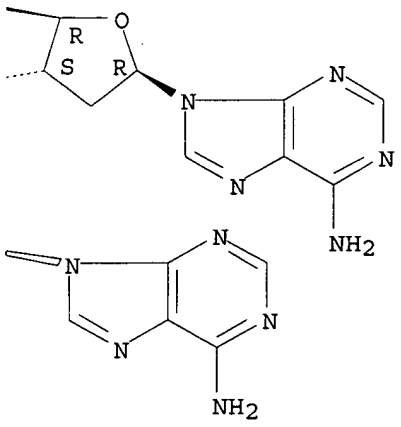

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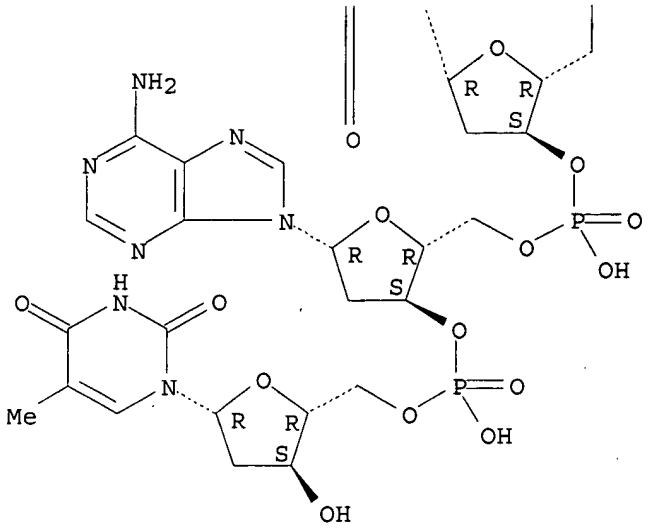

RN 133151-54-9 CAPLUS
CN Thymidine, 2'-deoxyadenylyl-(3'→5')-thymidylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')-2'-deoxycytidylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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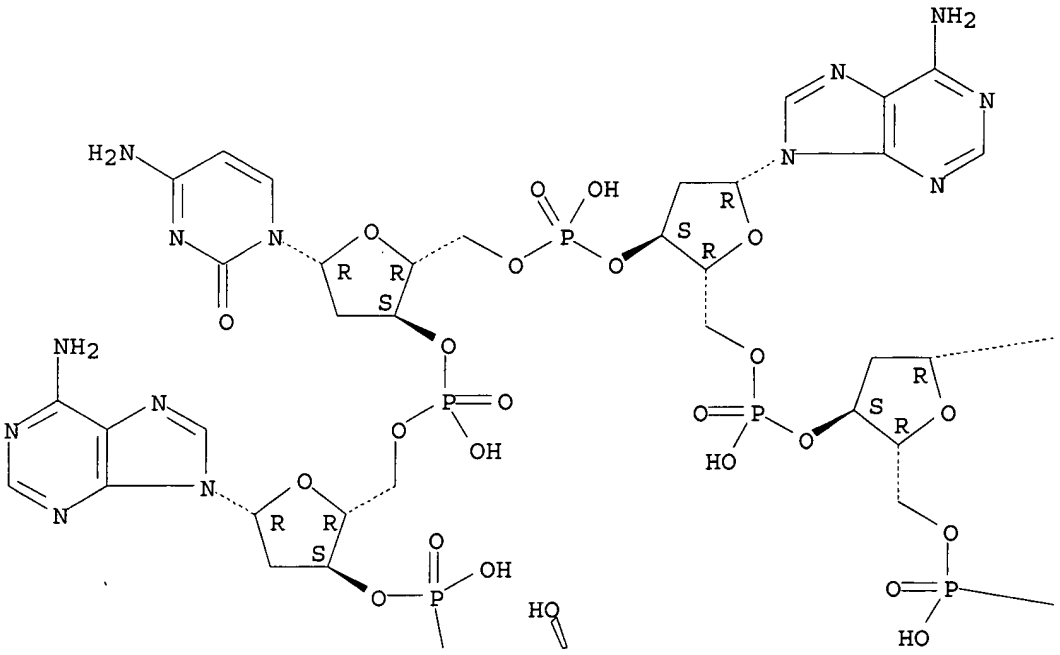

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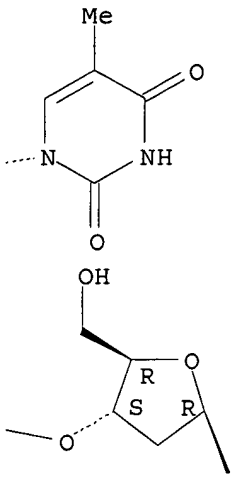

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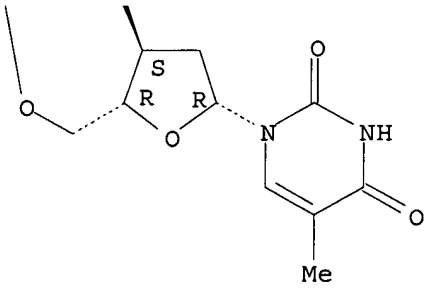

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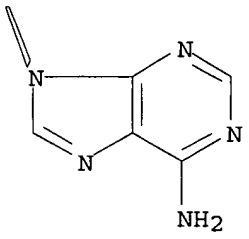

RN 133151-55-0 CAPLUS
CN Adenosine, 2'-deoxyadenylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')-thymidylyl-(3'→5')-2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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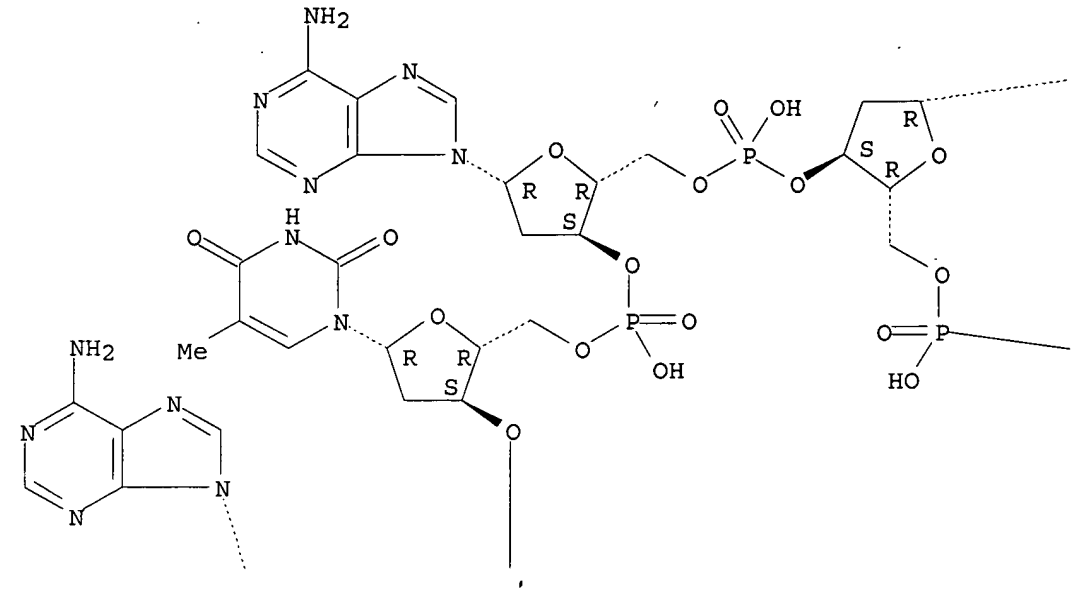

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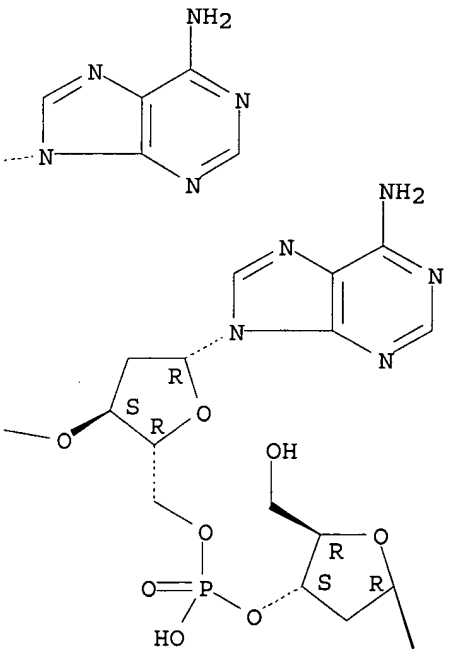

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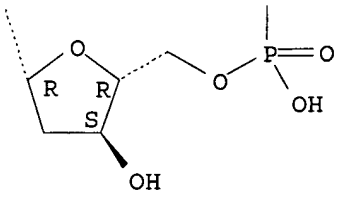

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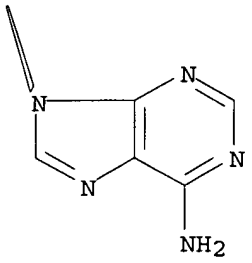

RN 133151-56-1 CAPLUS
CN Adenosine, 2'-deoxyadenylyl-(3'→5')-thymidylyl-(3'→5')-thymidylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')-2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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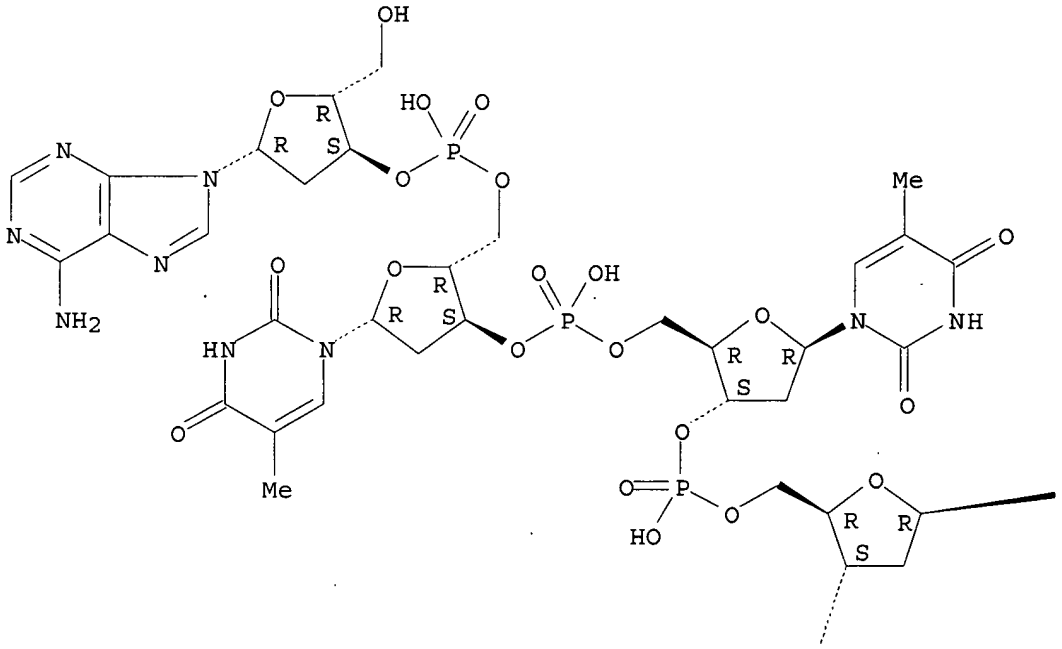

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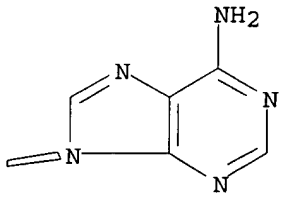

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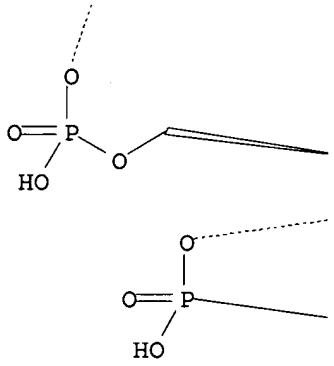

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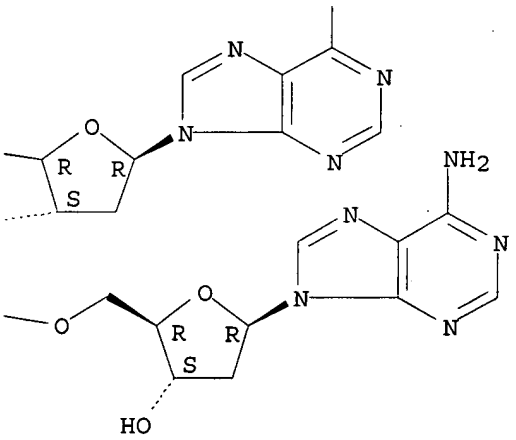

RN 133151-57-2 CAPLUS
CN Adenosine, 2'-deoxyadenylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')-thymidylyl-(3'→5')-thymidylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')-2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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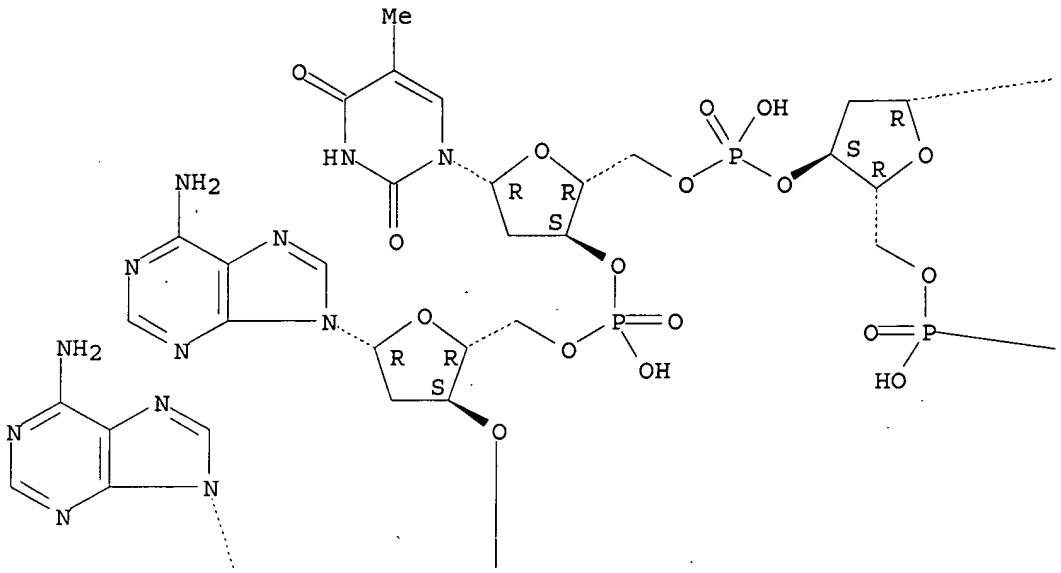

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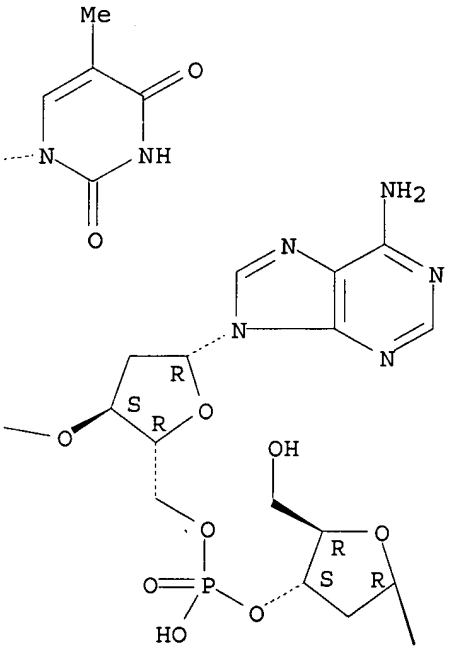

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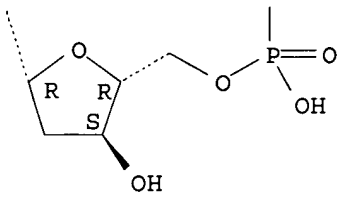

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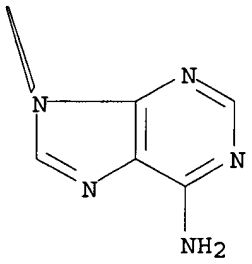

RN 133151-58-3 CAPLUS
CN Adenosine, 2'-deoxyadenylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')-thymidylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')-2'-deoxycytidylyl-(3'→5')-2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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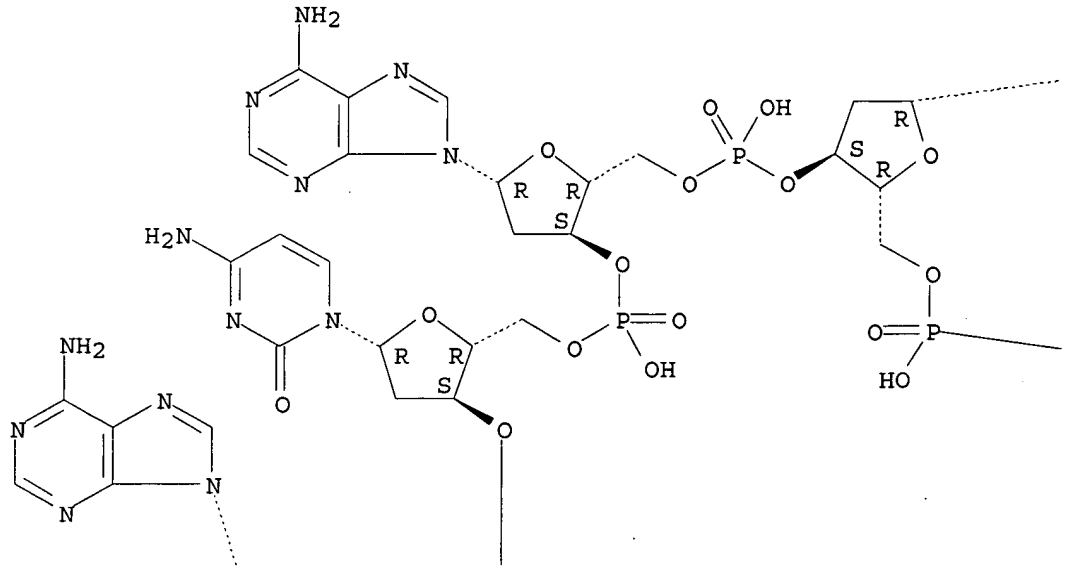

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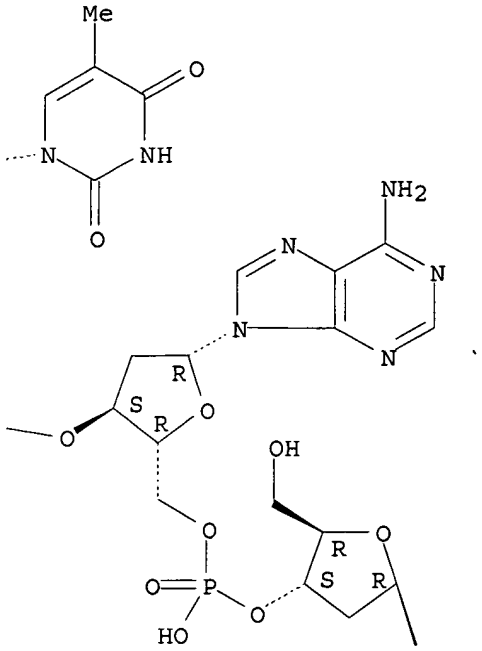

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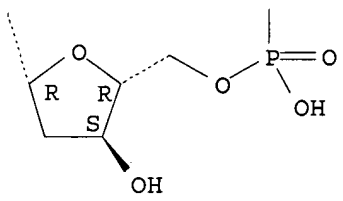

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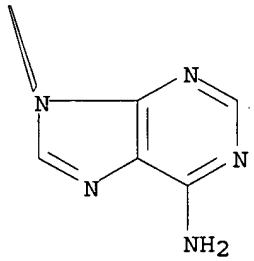

RN 133151-59-4 CAPLUS
CN Adenosine, 2'-deoxyadenylyl-(3'→5')-thymidylyl-(3'→5')-thymidylyl-(3'→5')-thymidylyl-(3'→5')-2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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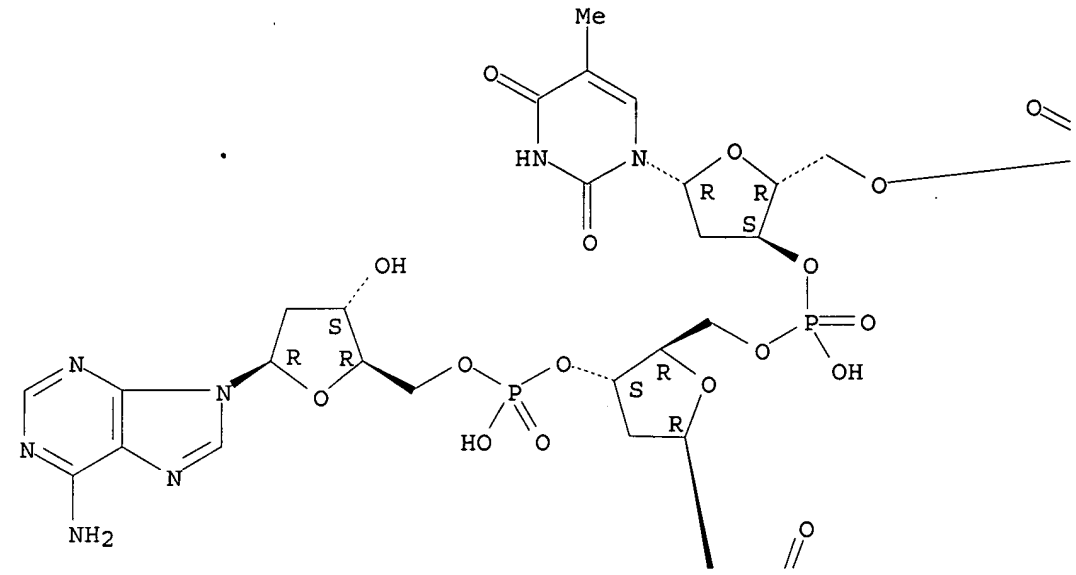

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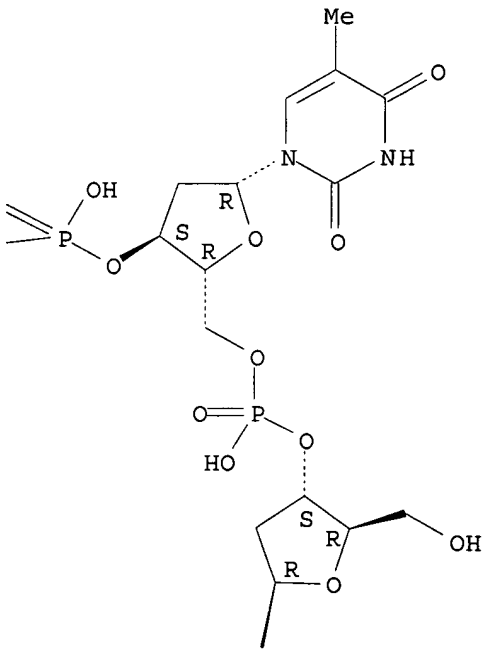

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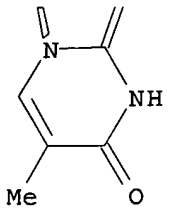

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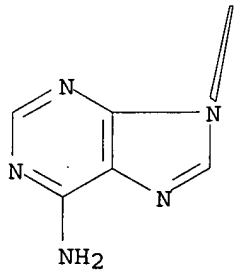
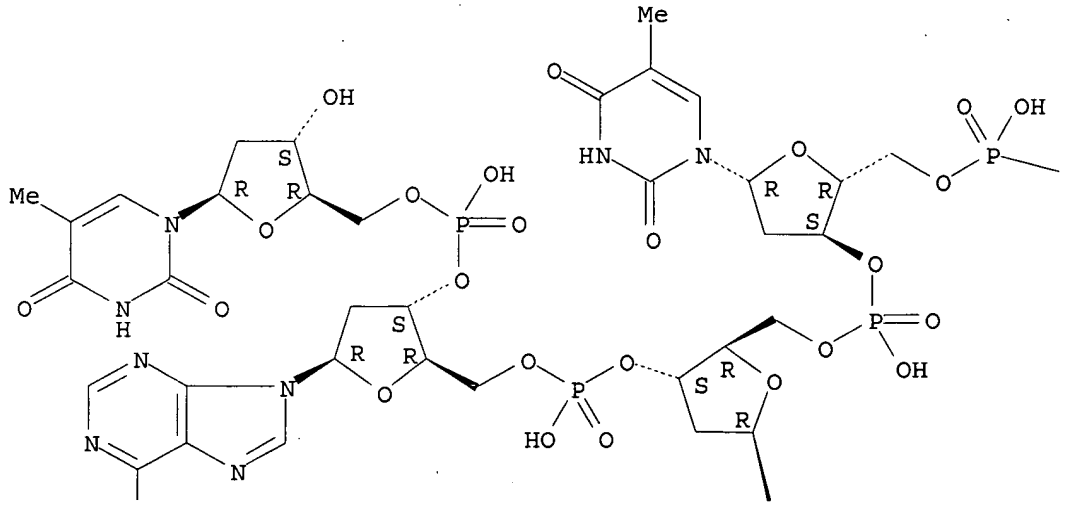


RN 133164-67-7 CAPLUS
CN Thymidine, 2'-deoxyadenylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')-thymidylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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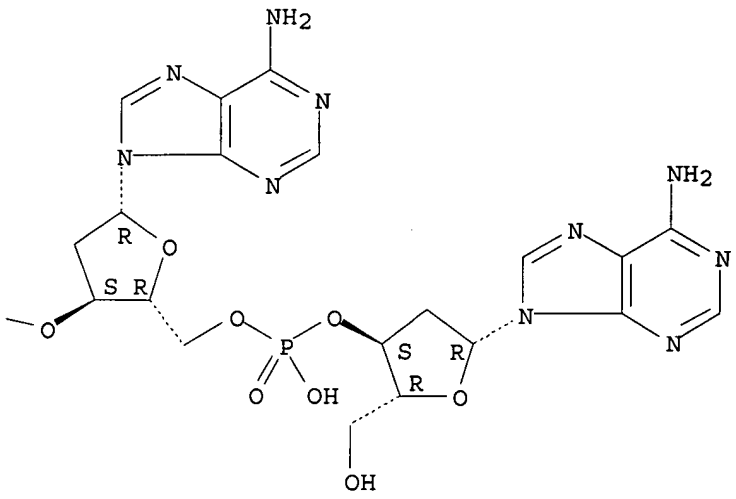

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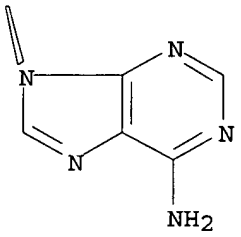
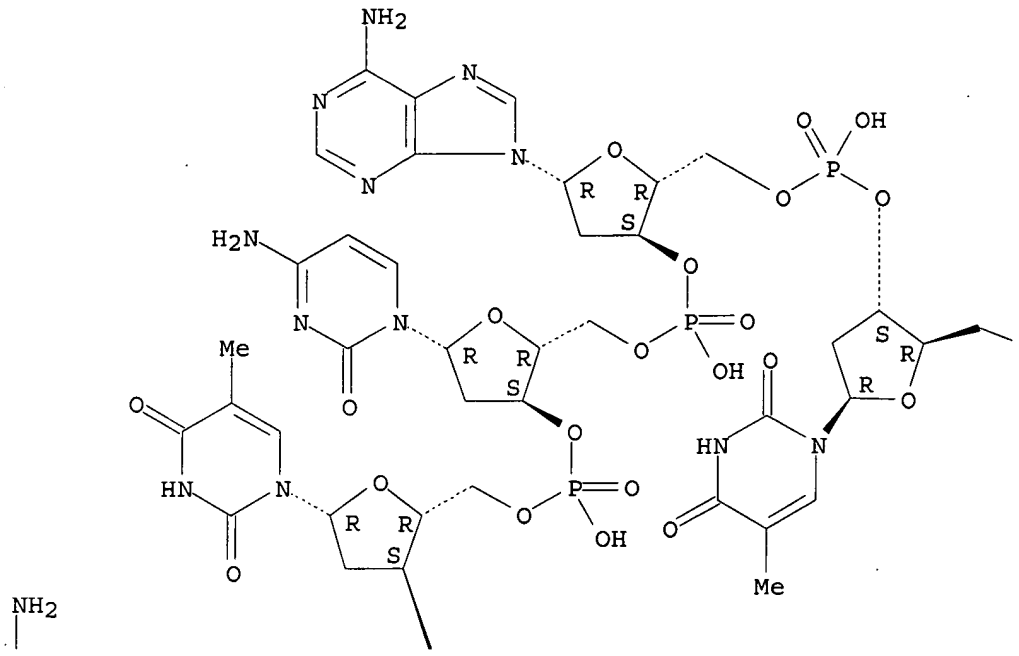


RN 133177-35-2 CAPLUS
CN Adenosine, 2'-deoxyadenylyl-(3'→5')-thymidylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')-2'-deoxycytidylyl-(3'→5')-thymidylyl-(3'→5')-2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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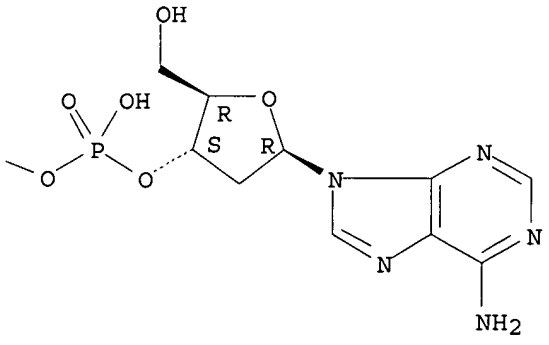

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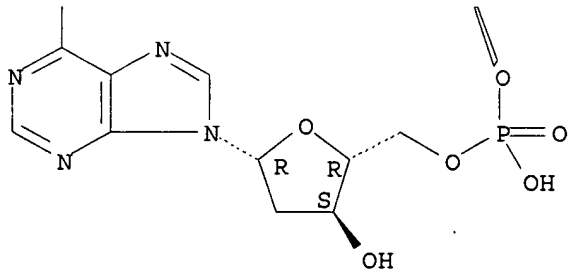
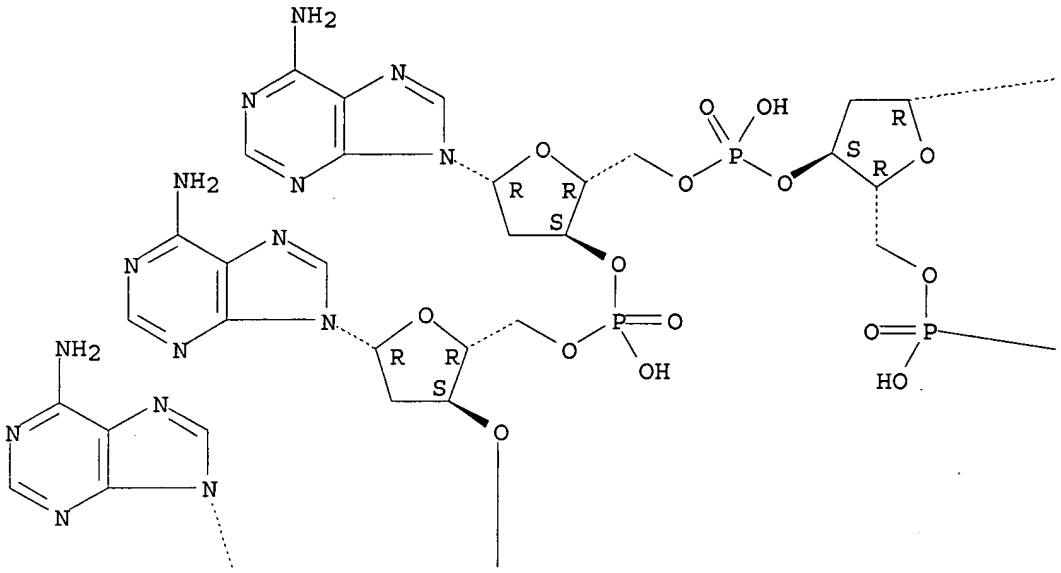


RN 133177-36-3 CAPLUS
CN Adenosine, 2'-deoxycytidylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')-thymidylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')-2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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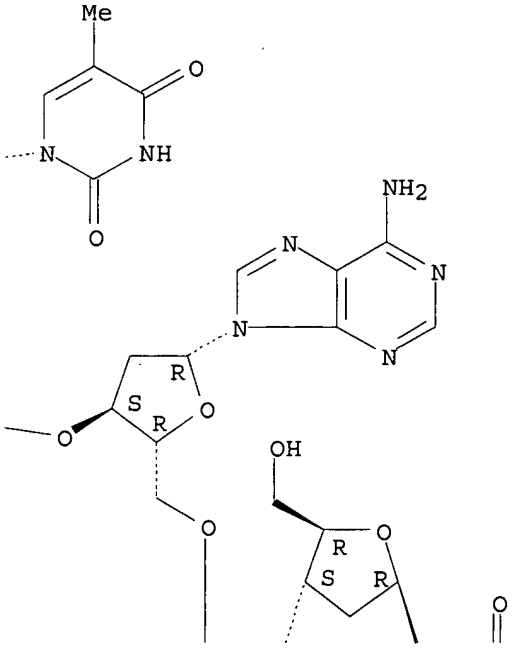

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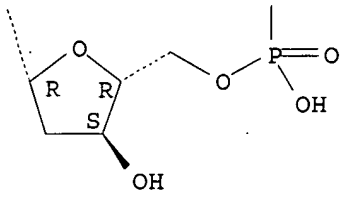

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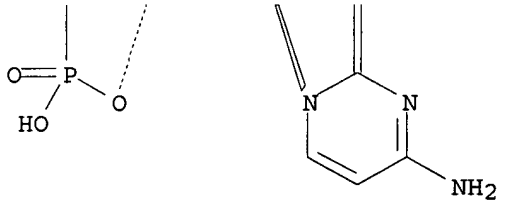
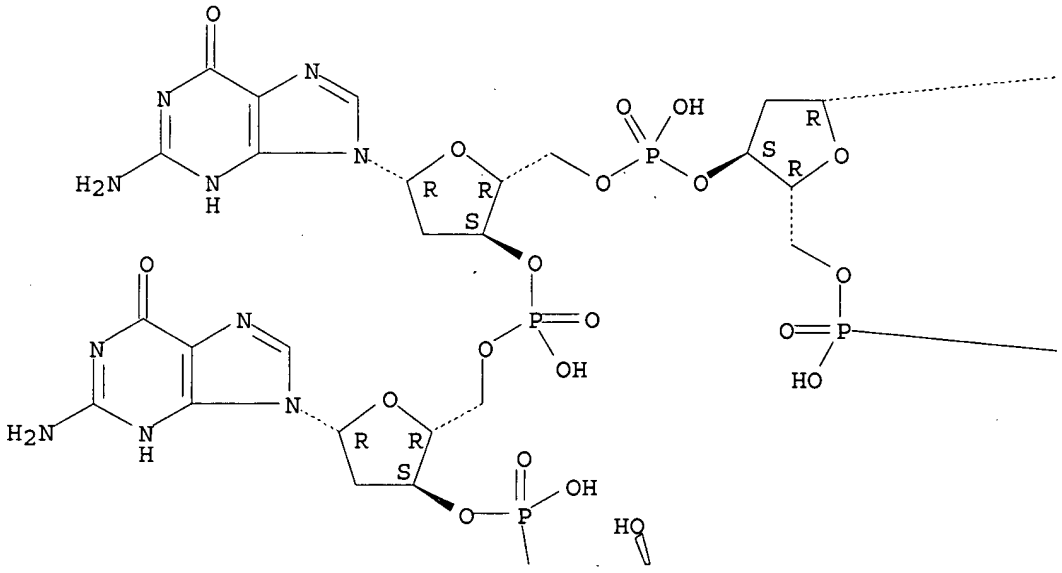


RN 176328-79-3 CAPLUS
CN Thymidine, 2'-deoxyguanylyl-(3'→5')-2'-deoxycytidylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')-2'-deoxyguanylyl-(3'→5')-2'-deoxyguanylyl-(3'→5')- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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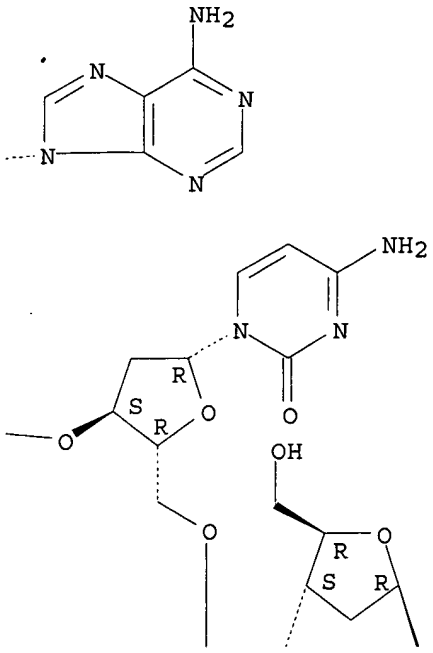

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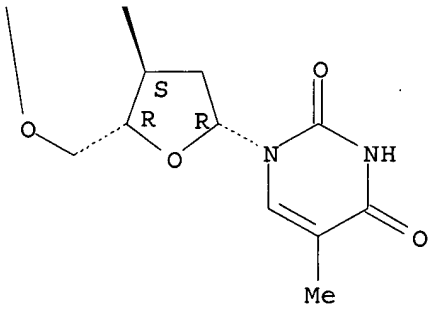

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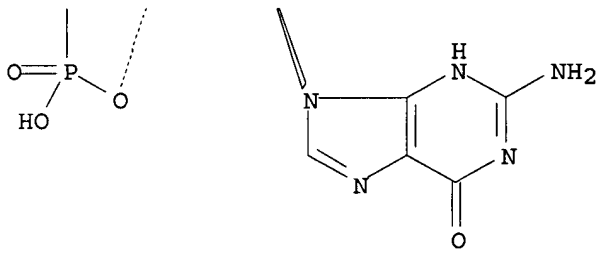

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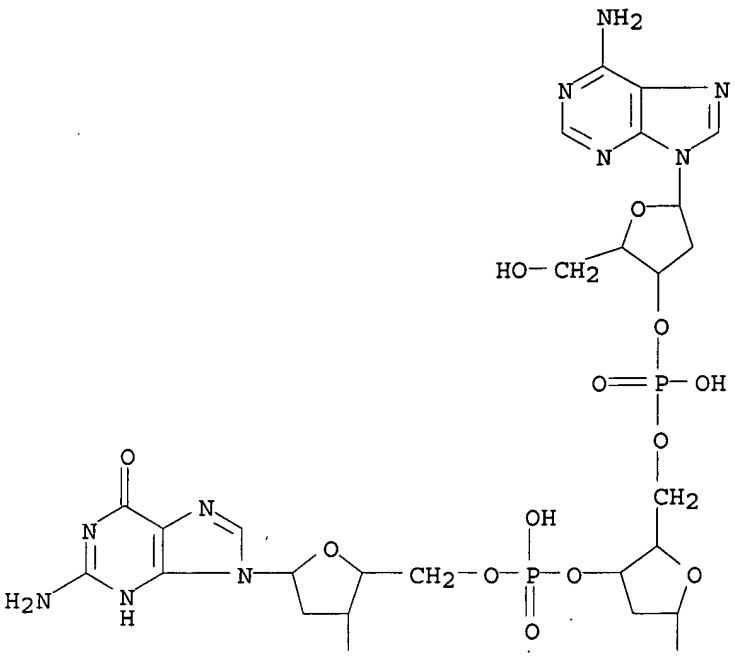
CN Adenosine, 2'-deoxyadenylyl-(3'→5')-2'-deoxyguanylyl-(3'→5')-2'-deoxyguanylyl-(3'→5')-thymidylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')-2'-deoxy- (9CI) (CA INDEX NAME)

PAGE 1-A



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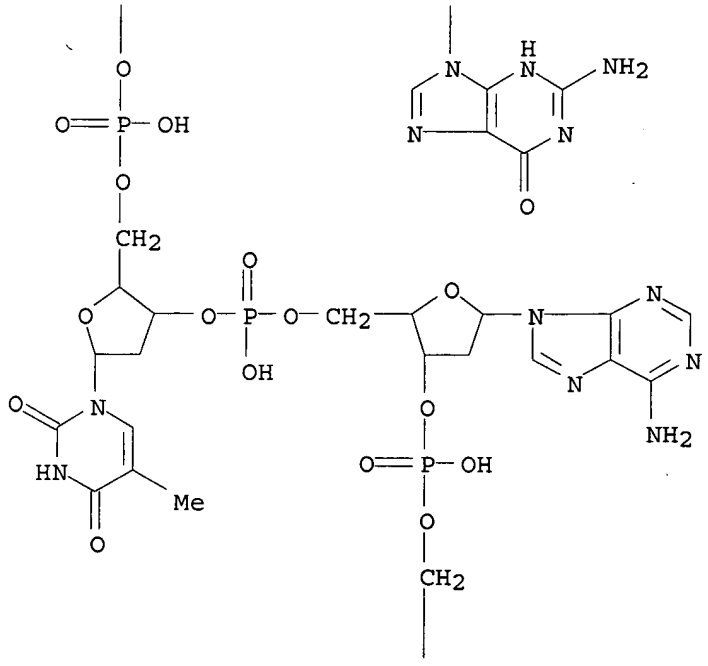

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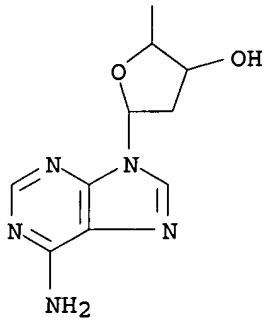
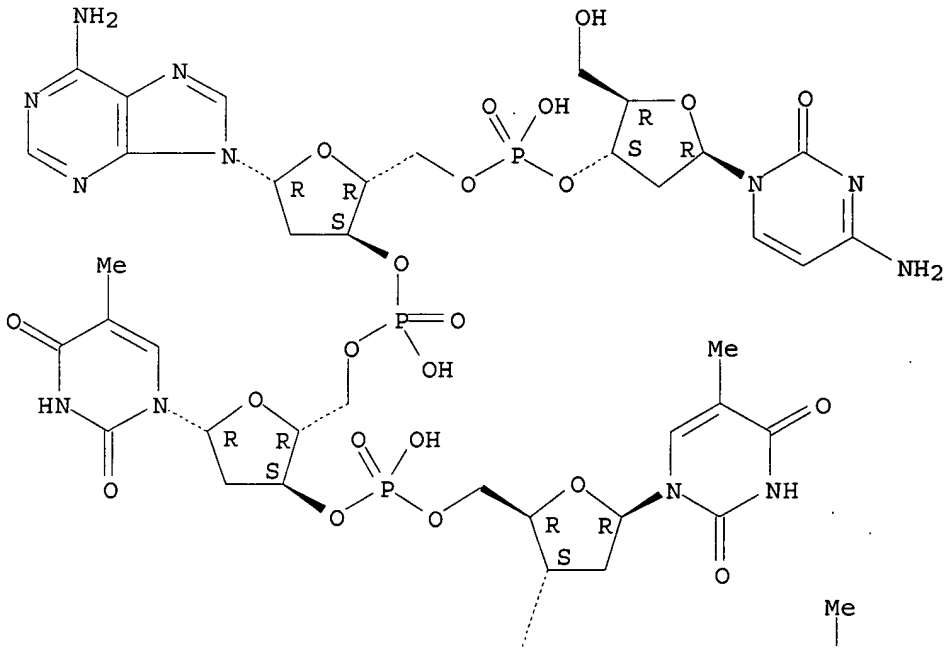


RN 249277-96-1 CAPLUS
CN Thymidine, 2'-deoxycytidylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')-thymidylyl-(3'→5')-thymidylyl-(3'→5')- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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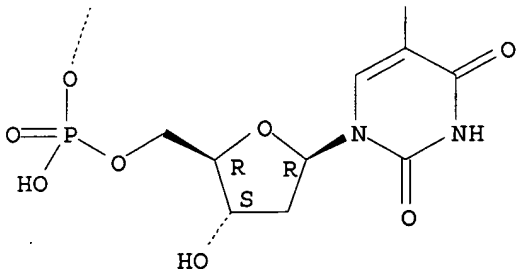
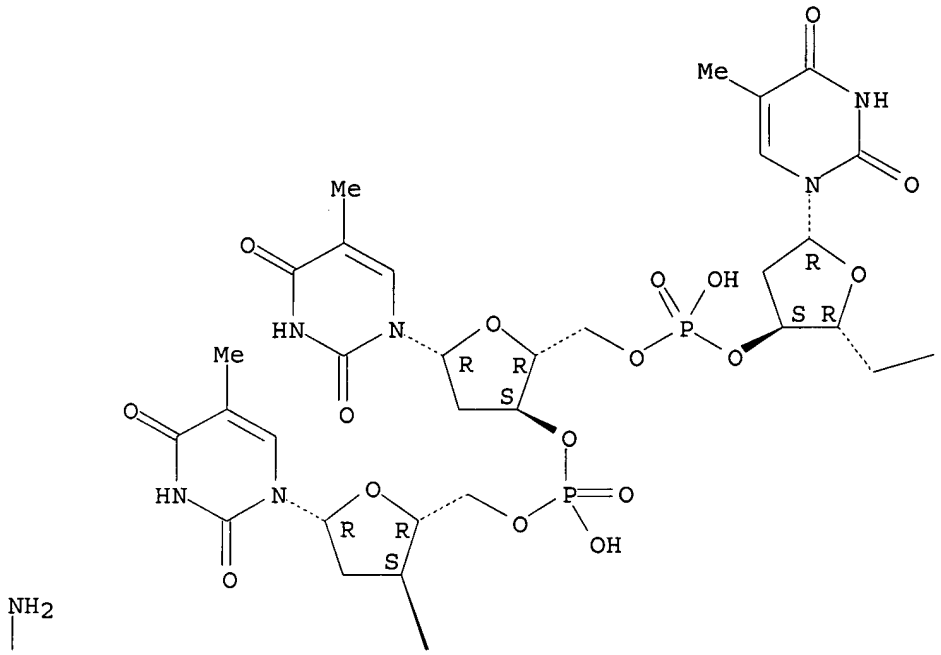


RN 651770-05-7 CAPLUS
CN Thymidine, 2'-deoxyadenylyl-(3'→5')-thymidylyl-(3'→5')-thymidylyl-(3'→5')-thymidylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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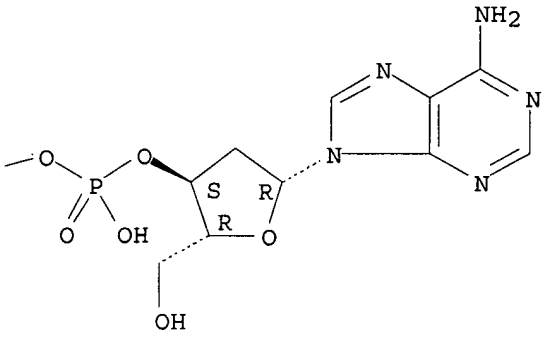

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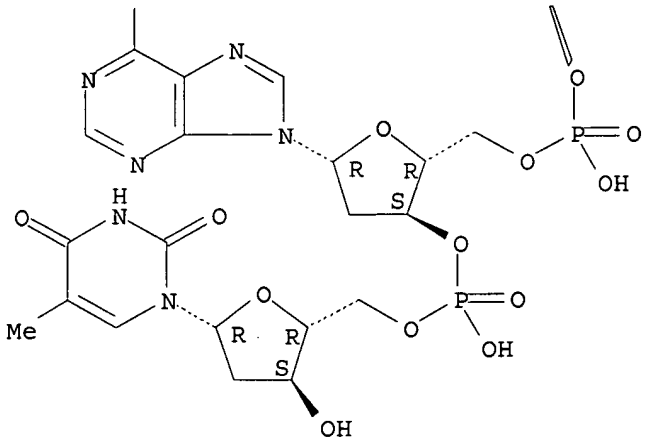
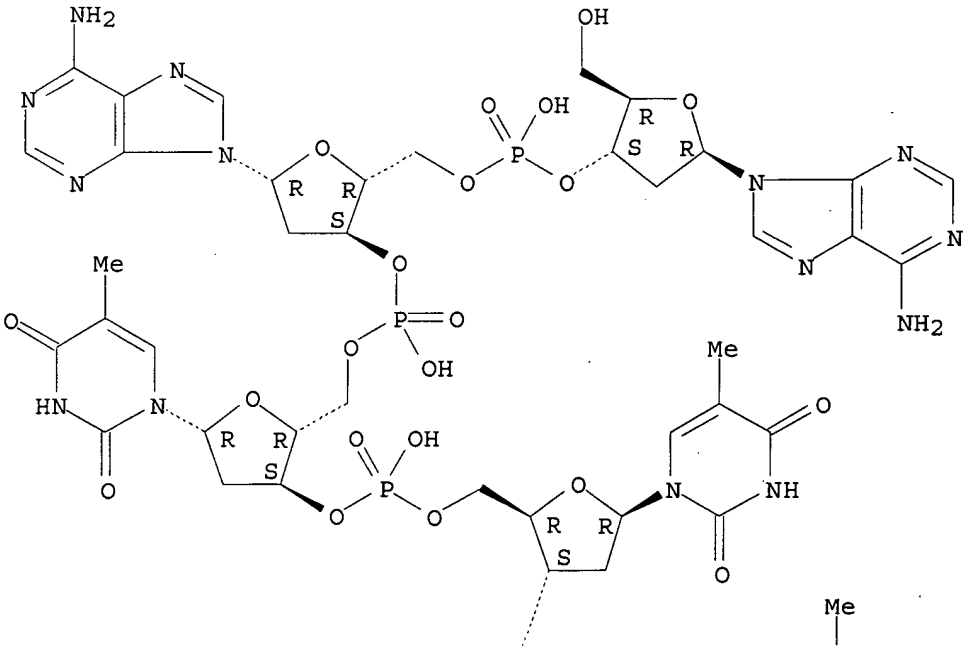


RN 651770-06-8 CAPLUS
CN Adenosine, 2'-deoxyadenylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')-thymidylyl-(3'→5')-thymidylyl-(3'→5')-thymidylyl-(3'→5')-2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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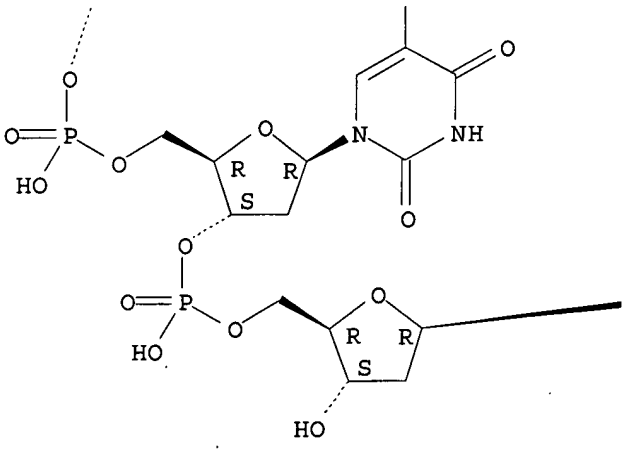

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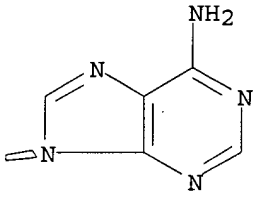
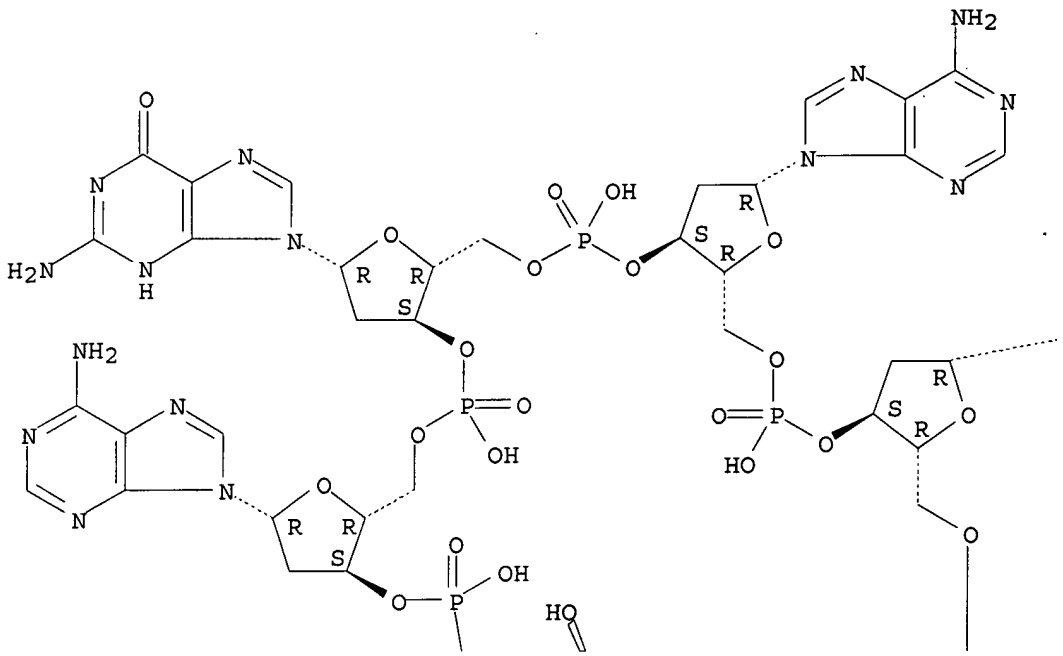


RN 651770-07-9 CAPLUS
CN Thymidine, 2'-deoxyadenylyl-(3'→5')-thymidylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')-2'-deoxyguanylyl-(3'→5')-2'-deoxyadenylyl-(3'→5')- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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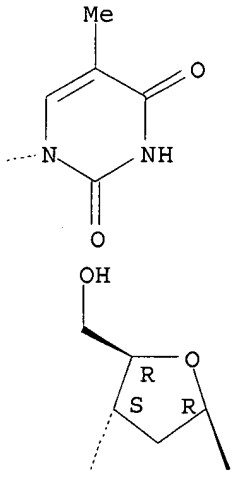

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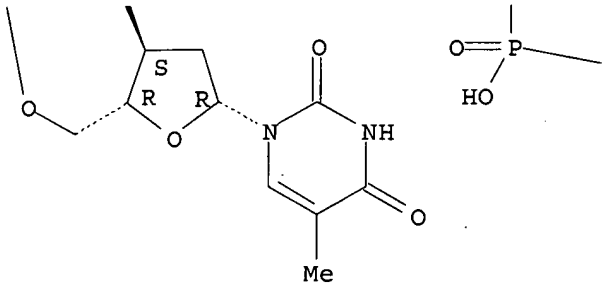

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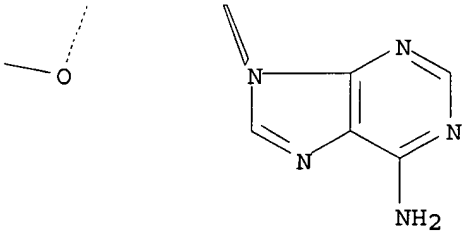

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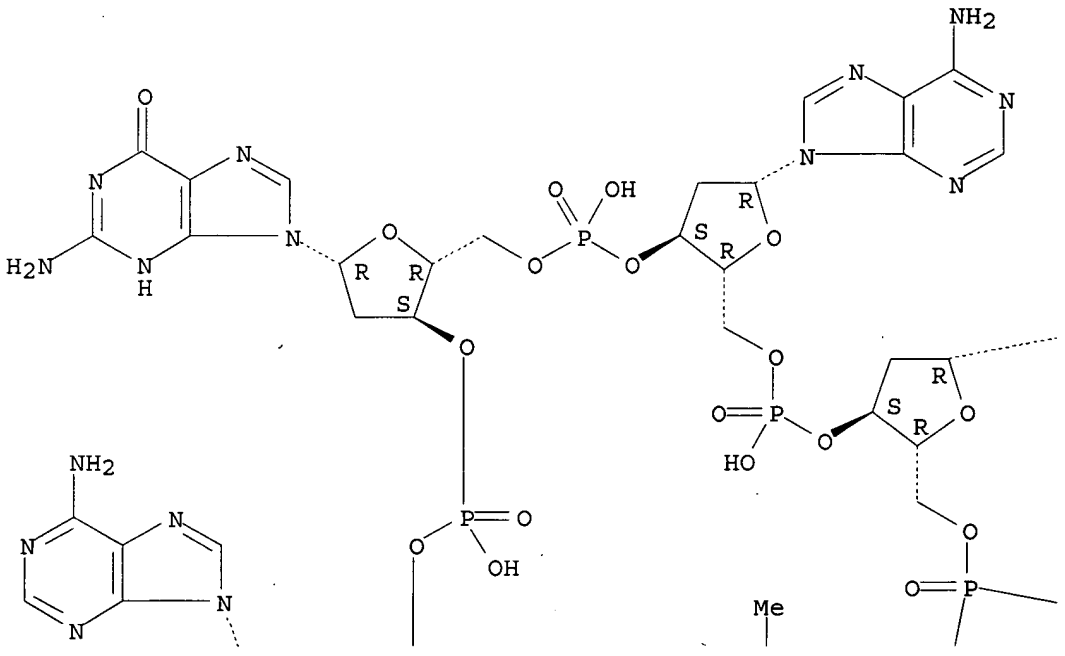
Absolute stereochemistry.

PAGE 1-A



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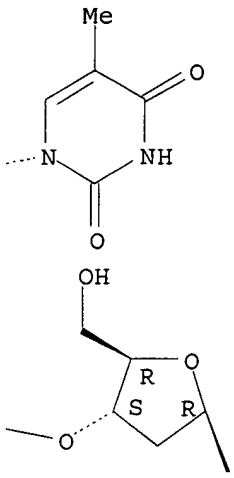

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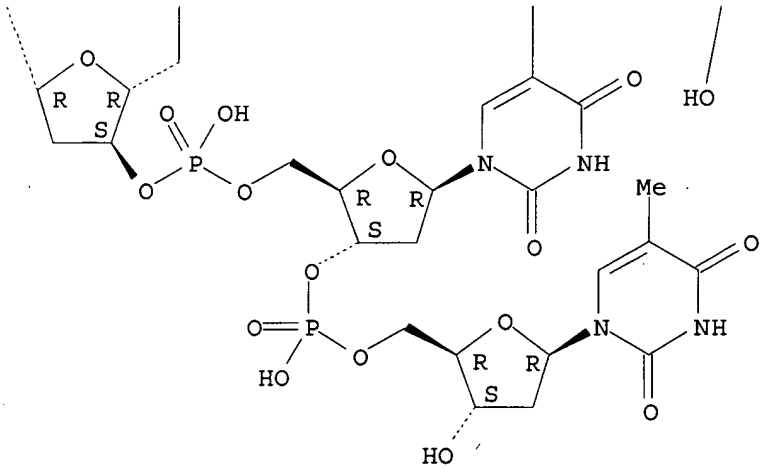

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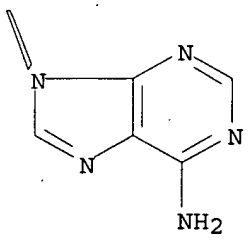
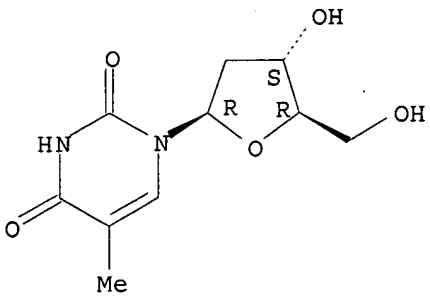


L5 ANSWER 11 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2003:996240 CAPLUS
DN 140:159523
TI Role of histidine-85 in the catalytic mechanism of thymidine phosphorylase as assessed by targeted molecular dynamics simulations and quantum mechanical calculations
AU Mendieta, Jesus; Martin-Santamaria, Sonsoles; Priego, Eva-Maria; Balzarini, Jan; Camarasa, Maria-Jose; Perez-Perez, Maria-Jesus; Gago, Federico
CS Departamento de Farmacologia, Universidad de Alcala, Alcala de Henares, E-28871, Spain
SO Biochemistry (2004), 43(2), 405-414
CODEN: BICHAW; ISSN: 0006-2960
PB American Chemical Society
DT Journal
LA English
AB The structural changes taking place in the enzyme thymidine phosphorylase (TPase, also known as PD-ECGF) that are required to achieve catalytic competence upon binding thymidine and phosphate have been simulated by targeted mol. dynamics (tMD). The hinge regions were characterized by structural homol. comparisons with pyrimidine nucleoside phosphorylase, whose x-ray structure has been solved both in a closed and in an open form. The rearrangement of residues around the substrate that was observed during the tMD trajectory suggested that His-85 could be playing an important role in the catalytic mechanism. A quantum mech. study of the reaction in the presence of the most relevant active site residues was then performed at the semiempirical level. The results revealed that His-85 could be involved in the protonation of the pyrimidine base at the O2 position to yield the enol tautomer of the base. To establish the role of this oxygen atom in the reaction, ground states, transition states, and final products were studied using higher level ab initio methods starting from both thymidine and 2-thiothymidine as alternative substrates. Comparison of both transition states showed that replacing the oxygen at position 2 of the pyrimidine base by sulfur should accelerate the reaction rate. Consistent with this result, 2-thiothymidine was shown to be a better substrate for TPase than the natural substrate, thymidine. For simulating the final step of the reaction, tMD simulations were used to study domain opening upon product formation considering both the enol and keto tautomers of thymine. Product release from the enzyme was easiest in the simulation that incorporated the keto tautomer of thymine, suggesting that the enol intermediate spontaneously tautomerizes back to the more energetically stable keto form. These results highlight a previously unreported role for His-85 in the catalytic mechanism of TPase and can have important implications for the design of novel TPase inhibitors.
IT 50-89-5, Thymidine, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(substrate; MD and QM calcns. of active site His-85 role in pyrimidine base O2 protonation in two-step SN1 reaction mechanism of thymidine phosphorylase)
RN 50-89-5 CAPLUS
CN Thymidine (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.




RE.CNT 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 12 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:832746 CAPLUS
DN 137:352492
TI Copper-catalyzed formation of carbon-heteroatom and carbon-carbon bonds by arylation and vinylation of amines, amides, hydrazides, heterocycles, alcohols, enolates, and malonates, using aryl, heteroaryl, and vinyl halides and analogs
IN Buchwald, Stephen L.; Klapars, Artis; Antilla, Jon C.; Job, Gabriel E.; Wolter, Martina; Kwong, Fuk Y.; Nordmann, Gero; Hennessy, Edward J.
PA Massachusetts Institute of Technology, USA
SO PCT Int. Appl., 306 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
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| | RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
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| | US 2003065187 | A1 | 20030403 | US 2002-128981 | 20020424 |
| | US 6759554 | B2 | 20040706 | | |
| | EP 1390340 | A1 | 20040225 | EP 2002-728925 | 20020424 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | | | | |
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| | JP 2004536798 | T2 | 20041209 | JP 2002-583366 | 20020424 |
| | US 2004019216 | A1 | 20040129 | US 2003-435719 | 20030508 |
| | US 6867298 | B2 | 20050315 | | |
| | US 2005215794 | A1 | 20050929 | US 2005-28500 | 20050104 |
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| | US 2001-348014P | P | 20011024 | | |
| | US 2001-344208P | P | 20011221 | | |
| | US 2002-128981 | A3 | 20020424 | | |
| | WO 2002-US12785 | W | 20020424 | | |
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OS CASREACT 137:352492; MARPAT 137:352492
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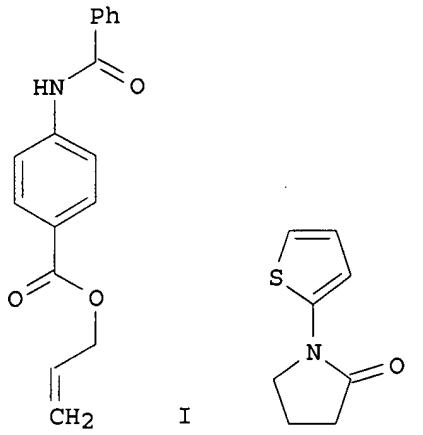
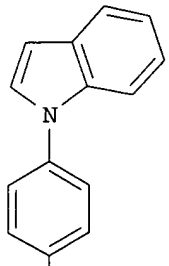



I




II




III

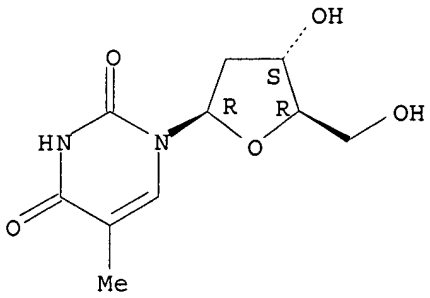
AB The invention relates to copper-catalyzed carbon-heteroatom and carbon-carbon bond-forming methods. More specifically, it relates to the arylation, heteroarylation, and vinylation of compds. with nucleophilic N, O, and C atoms, by aryl and vinyl halides and sulfonates, using various Cu-based catalysts and suitable ligands. The methods provide an inexpensive alternative to corresponding palladium-catalyzed reactions. Thus, the invention includes copper-catalyzed methods of forming a carbon-nitrogen bond between the nitrogen atom of an amide or amine moiety and the activated carbon of an aryl, heteroaryl, or vinyl halide or sulfonate. The invention provides similar copper-catalyzed reactions of acyl hydrazines (i.e., hydrazides). The invention further relates to copper-catalyzed arylation and vinylation of nitrogen-containing heteroaroms., e.g., indole, pyrazole, and indazole, at nitrogen. Similarly, the invention provides copper-catalyzed arylation and vinylation of alcs. at the oxygen atom. Finally, the invention provides copper-catalyzed methods of forming a carbon-carbon bond between reactants with nucleophilic carbon atoms, e.g., an enolate or malonate anion, and the activated carbon of the aryl, heteroaryl, or vinyl halides or sulfonates. Importantly, all of the invention methods are relatively inexpensive to practice due to the low cost of the copper catalysts. For example, a claimed method for amines, amides, and hydrazides involves reaction of halides and sulfonates Z-X [Z = (un)substituted aryl, heteroaryl, or alkenyl; X = iodo, Br, Cl, alkylsulfonate, arylsulfonate] with amines and derivs. R-NH-R' [R = alkyl, cycloalkyl aralkyl, aryl, heteroaryl, formyl, acyl, alkoxycarbonyl, aryloxycarbonyl, acylamino, etc.; R' = H, alkyl, cycloalkyl, (hetero)aralkyl, (hetero)aryl, formyl, acyl, amino, or amidino; with provisos] in the presence of a copper atom or ion and a ligand in the presence of a Bronsted base, yielding a corresponding arylated or vinylated product Z-NRR'. Thus, arylation of benzamide with allyl 4-iodobenzoate in dioxane solvent in the presence of CuI (catalyst), trans-1,2-cyclohexanediamine (ligand), and K3PO4 (base), at 110° in a resealable Schlenk tube, gave the expected product I in 91% yield. Similarly, 2-pyrrolidinone was N-heteroarylated by 2-iodothiophene under the same conditions to give II in quant. yield. Indole was N-arylated by 4-bromotoluene to give III in 95% yield. A similar reaction of (E)-2-undecen-1-ol with (E)-1-iodo-1-decene using CuI, 3,4,7,8-tetramethyl-1,10-phenanthroline, and Cs2CO3 in PhMe at 80°, gave 68% (E,E)-1-(dec-1-enyloxy)undec-2-ene.

IT 50-89-5D, Thymidine, derivs.
RL: RCT (Reactant); RACT (Reactant or reagent)
(arylation substrate; inexpensive copper-catalyzed arylation and vinylation of amines, amides, heterocycles, alcs., and enolates , using aryl, heteroaryl, and vinyl halides and analogs)

RN 50-89-5 CAPLUS

CN Thymidine (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.




RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 13 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:90341 CAPLUS
DN 136:133595
TI Identifying antigen clusters for monitoring a global state of an immune system
IN Cohen, Irun R.; Domany, Eytan; Quintana, Fransisco J.; Hed, Guy; Getz, Gad
PA Yeda Research and Development Co. Ltd., Israel
SO PCT Int. Appl., 78 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | WO 2002008755 | A2 | 20020131 | WO 2001-IL660 | 20010718 |
| | WO 2002008755 | A3 | 20030912 | | |
| | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW | | | | |
| | RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| | CA 2418217 | AA | 20020131 | CA 2001-2418217 | 20010718 |
| | US 2004014069 | A1 | 20040122 | US 2003-332241 | 20030106 |
| PRAI | IL 2000-137460 | A | 20000724 | | |
| | WO 2001-IL660 | W | 20010718 | | |

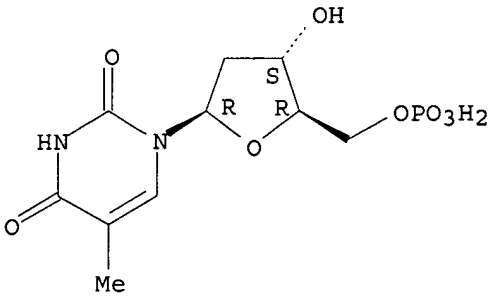
AB A method is provided for the clustering and identifying predefined antigens that are reactive with serum autoantibodies derived from patients in need of diagnosis of disease or monitoring of treatment. A coupled two-way clustering algorithm is used to identify the specific antigens in a cluster of antigens that are involved in antibody binding.
IT 25086-81-1, Poly t
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(method for identifying antigens and autoantigens involved in autoimmune disorders and other diseases in humans)
RN 25086-81-1 CAPLUS
CN 5'-Thymidylic acid, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 365-07-1

CMF C10 H15 N2 O8 P

Absolute stereochemistry.




L5 ANSWER 14 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2001:924099 CAPLUS
DN 136:50669
TI Selective labeling and isolation of phosphopeptides and applications to proteome analysis
IN Aebersold, Ruedi; Zhou, Hullin
PA University of Washington, USA
SO PCT Int. Appl., 59 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | WO 2001096869 | A1 | 20011220 | WO 2001-US18988 | 20010612 |
| | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW | | | | |
| | RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| | EP 1295123 | A1 | 20030326 | EP 2001-944486 | 20010612 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | | | | |
| | JP 2004503780 | T2 | 20040205 | JP 2002-510947 | 20010612 |
| | US 2002049307 | A1 | 20020425 | US 2001-880713 | 20011018 |
| | US 7052915 | B2 | 20060530 | | |
| PRAI | US 2000-210972P | P | 20000612 | | |
| | WO 2001-US18988 | W | 20010612 | | |

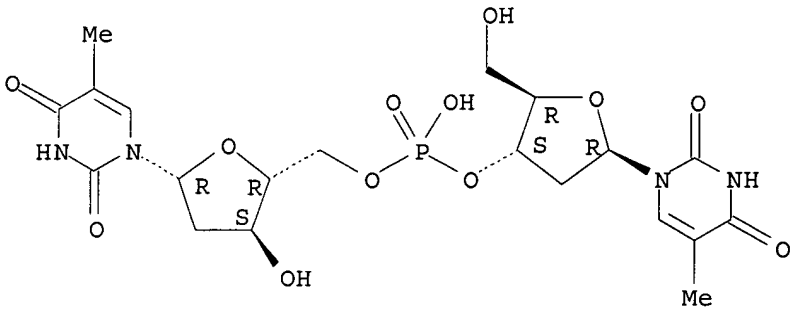
AB A method for selective labeling of phosphate groups in natural and synthetic oligomers and polymers in the presence of chemical related groups such as carboxylic acid groups. The method is specifically applicable to biol. oligomers and polymers, including phosphopeptides, phosphoproteins and phospholipids. In a specific embodiment, selective labeling of phosphate groups in proteins and peptides, for example, facilitates separation, isolation and detection of phosphoproteins and phosphopeptides in complex mixts. of proteins. Selective labeling can be employed to selectively introduce phosphate labels at phosphate groups in an oligomer or polymer, e.g., in a peptide or protein. Dection of the presence of the label, is used to detect the presence of the phosphate group in the oligomer or polymer. The method is useful for the detection of phosphoproteins or phosphopeptides. The phosphate label can be a colorimetric label, a

radiolabel, a fluorescent or phosphorescent label, an affinity label or a linker group carrying a reactive group (or latent reactive group) that allows selective attachment of the oligomer of polymer (protein or peptide) to a phosphate label, to an affinity label or to a solid support. The method can be combined with well-known methods of mass spectrometry to detect and identify phosphopeptides and phosphoproteins.

IT 1969-54-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(selective labeling and isolation of phosphopeptides and applications to proteome anal.)

RN 1969-54-6 CAPLUS
CN Thymidine, thymidylyl-(3'→5')- (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



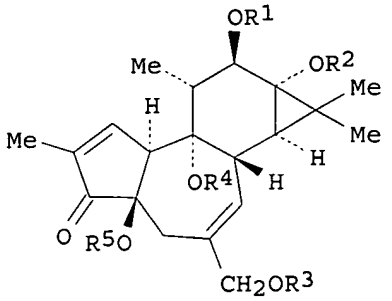

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 15 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2001:816455 CAPLUS
DN 135:348871
TI Antiviral compositions containing phorbol derivatives as the main active ingredient
IN Hattori, Masao; Yamamoto, Naoki; Mori, Masao
PA Lead Chemical Co., Ltd, Japan
SO PCT Int. Appl., 51 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | WO 2001082927 | A1 | 20011108 | WO 2000-JP2913 | 20000502 |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRAI WO 2000-JP2913 20000502
OS MARPAT 135:348871
GI




I

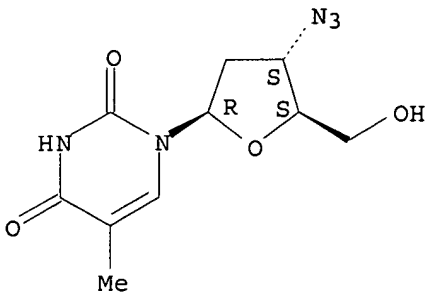
AB Described are antiviral compns. containing as the active ingredients: (i) phorbol derivs. which are represented by the general formula (I; wherein R1, R2, R3, R4 and R5 independently represent each hydrogen, an aliphatic carboxylate or an aromatic carboxylate.), have a ratio r = CC0/IC100 of 2 or more (wherein IC100 represents the concentration at which the cell pathogenic effect (CPE) of HIV-1 in MT-4 cells is inhibited at a ratio of 100; and CC0 represents the concentration at which the survival of MT-4 cells is reduced in a cell proliferation test), and show activation of protein kinase C (PKC) at a concentration of 10 ng/mL by 30% or less; and (ii) a chemical capable of suppressing or inhibiting the replication process or the maturation process of viruses. These compns. are efficacious particularly against human immunodeficiency virus (HIV). Thus, Croton tiglium seeds (3 kg) was refluxed with MeOH (10 L + 3) and the combined methanol solution was concentrated under reduced pressure to give an oil (763 g) which was suspended in 90% aqueous MeOH (7 L) and extracted with hexane (4 L + 3) and then with ether (4 L + 3). The combined ether extract was concentrated to give a resin-like substance (150 g) which was subjected to silica gel chromatog. and medium pressure liquid chromatog. to give 13-O-tigloylphorbol-20-(9Z,12Z-octadecadienoate) 60, 13-O-acetylphorbol-20-(9Z,12Z-octadecadienoate) 153, 12-O-dodecanoylphorbol-13-(2-methylbutyrate) 21, 12-O-(2-methylbutyroyl)phorbol-13-dodecanoate 30, 12-O-acetylphorbol-13-tiglate 35, 12-O-acetylphobol-13-decanoate 74, 12-O-decanoylphorbol-13-(2-methylbutyrate) 57, 12-O-tigloylphorbol-13-(2-methylbutyrate) 12, and 12-O-tetradecanoylphorbol-13-acetate 110 mg. Derivatization of these compds. by saponification, selective hydrolysis, esterification with acetic anhydride, benzoyl chloride, or butyryl chloride, reduction, or methylation, etc. gave phorbol, isophorbol, 4-deoxy-4α-phorbol, 13-O-acetylphorbol, phorbol-12,13-diacetate, 13-O-acetylcrotophorbolone-enol-20-linoleate, 12-O-tetradecanoylphorbol-13,20-diacetate, 4α-phorbol-12,13,20-triacetate, 4α-phorbol-4,12,13,20-tetraacetate, phorbol-12,13,20-triacetate, lumiphorbol-12,13,20-triacetate, 3-deoxo-3β-hydroxyphorbol-12,13,20-triacetate, 4-O-methylphorbol-12,13,20-triacetate, phorbol-4,9,12,13,20-pentaacetate, phorbol-12,13,20-tribenzoate, and 4α-phorbol-12,13,20-tributyrate. In assays for testing anti-HIV activity and PKC activation activity, 12-O-acetylphobol-13-decanoate showed IC100 and CC0 (defined as above) of 0.0076 and 62.5, resp., with r ratio of 8,220 and exhibited 0 and 17% PKC activation at 10 ng/mL and 17 μg/mL, resp.

IT 30516-87-1, Zidovudine
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(HIV reverse transcriptase inhibitor, antiviral composition containing; antiviral compns. against HIV-1 containing phorbol derivs. of Croton tiglium and their derivs. as active ingredients)

RN 30516-87-1 CAPLUS

CN Thymidine, 3'-azido-3'-deoxy- (7CI, 8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).




RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

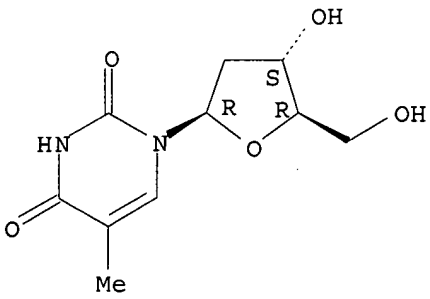
L5 ANSWER 16 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2001:763228 CAPLUS
DN 135:314428
TI Positive selection of transformants by auxotroph complementation with enzymatic precursor conversion
IN Silva, Christopher J.
PA Cubist Pharmaceuticals, Inc., USA
SO PCT Int. Appl., 51 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | WO 2001077366 | A1 | 20011018 | WO 2001-US11567 | 20010410 |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

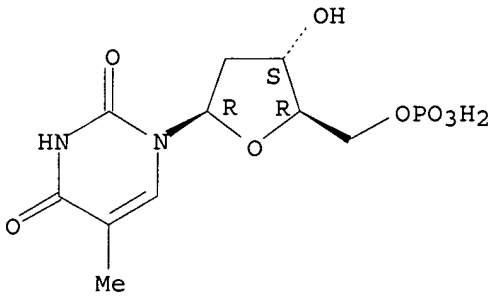
PRAI US 2000-195911P P 20000410
AB This invention relates to a pos. selection method, compds. useful for the pos. selection and appropriate hosts. The method permits one to select a host, or auxotroph, which may be a prokaryote or an eukaryote, based on the ability of the host to express an enzyme(s) capable of catalyzing a reaction that converts a precursor mol. into a mol. or factor necessary for the host's survival. This invention encompasses methods useful to find new enzymes expressing a desired activity, methods of selecting host cells, methods of maintaining a plasmid within a host that do not utilize antibiotics, and methods of expressing proteins or other materials for com. prodn. purposes.
IT 50-89-5, Thymidine, biological studies 365-07-1, Thymidine-5'-phosphate 365-08-2, Thymidine-5'-triphosphate 491-97-4, Thymidine-5'-diphosphate
RL: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)
(pos. selection of transformants by auxotroph complementation with enzymic precursor conversion)
RN 50-89-5 CAPLUS
CN Thymidine (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



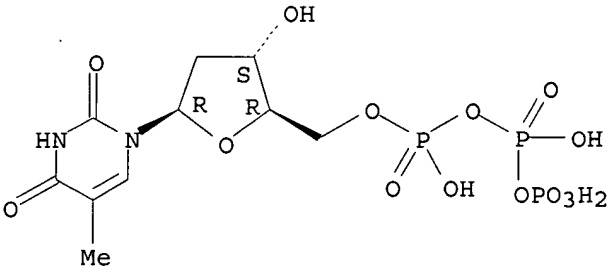
RN 365-07-1 CAPLUS
CN 5'-Thymidylic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



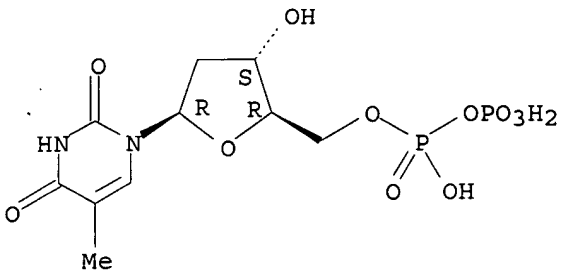
RN 365-08-2 CAPLUS
CN Thymidine 5'-(tetrahydrogen triphosphate) (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 491-97-4 CAPLUS
CN Thymidine 5'-(trihydrogen diphosphate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.




RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 17 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2001:338762 CAPLUS
DN 134:362292
TI Methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile
IN Farr, Spencer
PA Phase-1 Molecular Toxicology, USA
SO PCT Int. Appl., 222 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | WO 2001032928 | A2 | 20010510 | WO 2000-US30474 | 20001103 |
| | WO 2001032928 | A3 | 20020725 | | |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

| | | | |
|---|---|---|---|
| PRAI | US 1999-165398P | P | 19991105 |
| | US 2000-196571P | P | 20000411 |

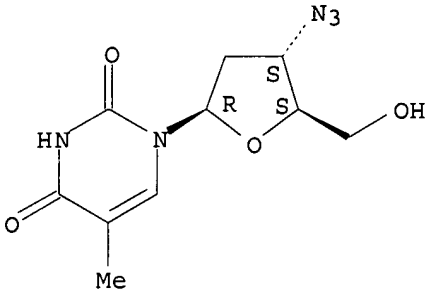
AB The invention discloses methods, gene databases, gene arrays, protein arrays, and devices that may be used to determine the hypersensitivity of individuals to a given agent, such as drug or other chemical, in order to prevent toxic side effects. In one embodiment, methods of identifying hypersensitivity in a subject by obtaining a gene expression profile of multiple genes associated with hypersensitivity of the subject suspected to be hypersensitive, and identifying in the gene expression profile of the subject a pattern of gene expression of the genes associated with hypersensitivity are disclosed. The gene expression profile of the subject may be compared with the gene expression profile of a normal individual and a hypersensitive individual. The gene expression profile of the subject that is obtained may comprise a profile of levels of mRNA or cDNA. The gene expression profile may be obtained by using an array of nucleic acid probes for the plurality of genes associated with hypersensitivity. The expression of the genes predetd. to be associated with hypersensitivity is directly related to prevention or repair of toxic damage at the tissue, organ or system level. Gene databases arrays and apparatus useful for identifying hypersensitivity in a subject are also disclosed.

IT 30516-87-1, Zidovudine
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)

(methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

RN 30516-87-1 CAPLUS
CN Thymidine, 3'-azido-3'-deoxy- (7CI, 8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).




L5 ANSWER 18 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2000:608931 CAPLUS
DN 133:206878
TI Enzymic manufacture of nucleotides from nucleosides using a complex of enzymes and phosphate donors without the use of nucleoside triphosphates
IN Singh, Jai P.; Smith, Michael D.; Levin, Joshua D.
PA Life Technologies, Inc., USA
SO PCT Int. Appl., 88 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

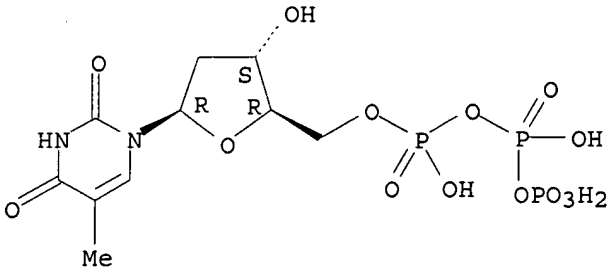
| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | WO 2000050625 | A1 | 20000831 | WO 2000-US4643 | 20000224 |
| | W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| | RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| | EP 1157124 | A1 | 20011128 | EP 2000-908783 | 20000224 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | |
| | JP 2002537772 | T2 | 20021112 | JP 2000-601188 | 20000224 |
| PRAI | US 1999-121639P | P | 19990224 | | |
| | WO 2000-US4643 | W | 20000224 | | |

AB The present invention relates to an enzymic method of synthesizing substantially pure, high quality nucleotides in large scale. The invention also relates to kits and compns. used in the methods of the invention. The method uses a series of kinases and phosphate donors other than nucleotides and phosphate recycling enzymes to progressively phosphorylate nucleosides. Small quantities of the target nucleotide are added to the reaction as a catalyst. The synthesis of dATP from dAMP using 3-phosphoglyceric acid as a phosphate donor using phosphoglycerate mutase, enolase, and AMP kinase in the presence of AMP 33 mM and dATP 0.1 mM is demonstrated. Yields of 94-98% and a purity of >88% were obtained.
IT 365-08-2P, DTTP
RL: BMF (Bioindustrial manufacture); BPN (Biosynthetic preparation); BIOL

(Biological study); PREP (Preparation)
(enzymic synthesis of; enzymic manufacture of nucleotides from nucleosides using complex of enzymes and phosphate donors without use of nucleoside triphosphates)

RN 365-08-2 CAPLUS
CN Thymidine 5'-(tetrahydrogen triphosphate) (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

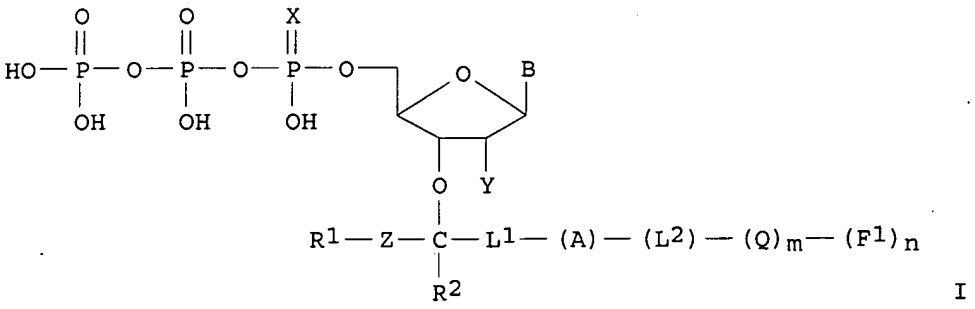



RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 19 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1996:601752 CAPLUS
DN 125:248330
TI Preparation of fluorescent dye-labeled nucleoside triphosphate derivatives as novel chain terminators and the use thereof for nucleic acid sequencing
IN Kwiatkowski, Marek
PA Swed.
SO PCT Int. Appl., 32 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | WO 9623807 | A1 | 19960808 | WO 1996-SE96 | 19960130 |
| | W: CA, JP, US | | | | |
| | RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE | | | | |
| | CA 2212000 | AA | 19960808 | CA 1996-2212000 | 19960130 |
| | EP 808320 | A1 | 19971126 | EP 1996-902039 | 19960130 |
| | EP 808320 | B1 | 20030409 | | |
| | R: BE, CH, DE, ES, FR, GB, IT, LI, NL, SE | | | | |
| | JP 10513178 | T2 | 19981215 | JP 1996-523466 | 19960130 |
| | ES 2197231 | T3 | 20040101 | ES 1996-902039 | 19960130 |
| | US 6255475 | B1 | 20010703 | US 1997-875243 | 19970916 |
| PRAI | SE 1995-342 | A | 19950131 | | |
| | WO 1996-SE96 | W | 19960130 | | |

OS MARPAT 125:248330
GI



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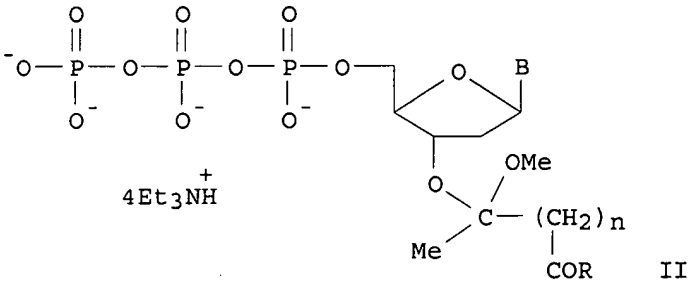


II

AB The invention relates to compds. of general structure [I; B = a nucleobase; X, Z = O, S; Y = H or (un)protected HO; R1 = hydrocarbyl, which optionally is substituted with a functional group; R2 = H or hydrocarbyl, which optionally is substituted with a functional group; A = an electron withdrawing or electron donating group capable of moderating the acetal stability of compound I; L1, L2 = hydrocarbon linkers, which may be the same or different, L2, when present, being either (i) connected to L1 via the group A, or (ii) directly connected to L1, the group A then being connected to one of linkers L1 and L2; F1 = a dye label; Q = a coupling group for F1; l, m, n = 0 or 1, with the proviso that l = 1 when m = 1, and l = 1 and m = 1 when n = 1] or salts thereof. The compds. of formula I are useful as deactivatable chain extension terminators. The invention also relates to the use of the compds. I in nucleic acid synthesis and nucleic acid sequencing as well as to a method of preparing compds. of Formula I. Thus, a com. deoxynucleoside triphosphate (pppdT, pppdC, pppdG, or pppdA) was chromatographed on a preparative Mono Q column to give the pure triphosphate which was treated with an enol ether CH2:C(OMe)(CH2)nCO2Me (n = 2-5) and CF3CO2H in dioxane, incubated at 20° for 60 min, neutralized with Et3N, and precipitated from a mixture of petroleum ether and Et2O to give a nucleotide acetal (II; n = 2-5; R = OMe; B = A, G, C, T). The latter compound was subjected to aminolysis with 1,3-diaminopropane in MeOH to give an amide II [R = NH(CH2)3NH2; n, B = same as above], which was dissolved in 0.1 M carbonate buffer (pH 10), treated with a solution of fluorescein isothiocyanate in DMF, and incubated overnight at 20° to give a fluorescein-labeled nucleoside triphosphate II [R = NH(CH2)3NHC(S)NH-fluorescein; n, B = same as above].

IT 181894-95-1P 181895-03-4P 181895-11-4P
181895-19-2P
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(preparation of fluorescent dye-labeled nucleoside triphosphate derivs. as novel chain extension terminators for nucleic acid sequencing)

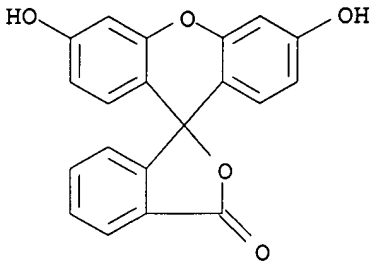
RN 181894-95-1 CAPLUS

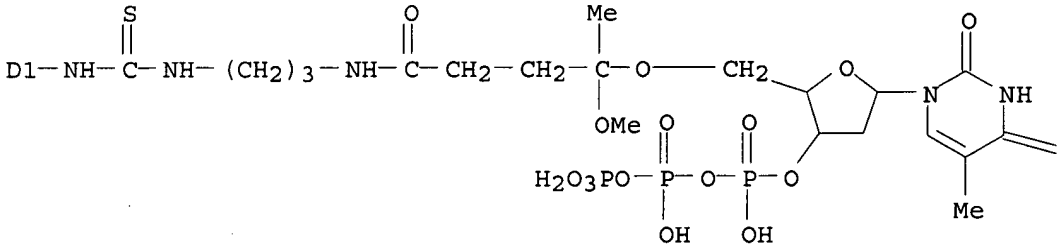
CN Thymidine 5'-(tetrahydrogen triphosphate), 3'-O-[4-[[3-[[[[3',6'-dihydroxy-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-5(or 6)-yl]amino]thioxomethyl]amino]propyl]amino]-1-methoxy-1-methyl-4-oxobutyl]-, compd. with N,N-diethylethanamine (1:4) (9CI) (CA INDEX NAME)

CM 1

CRN 181894-94-0
CMF C40 H46 N5 O21 P3.S
CCI IDS

PAGE 1-A

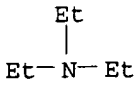




PAGE 1-B

CM 2

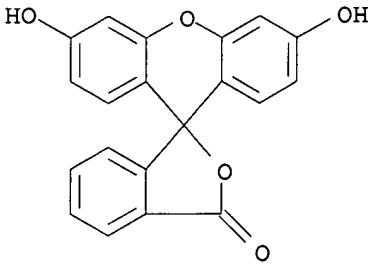
CRN 121-44-8
CMF C6 H15 N

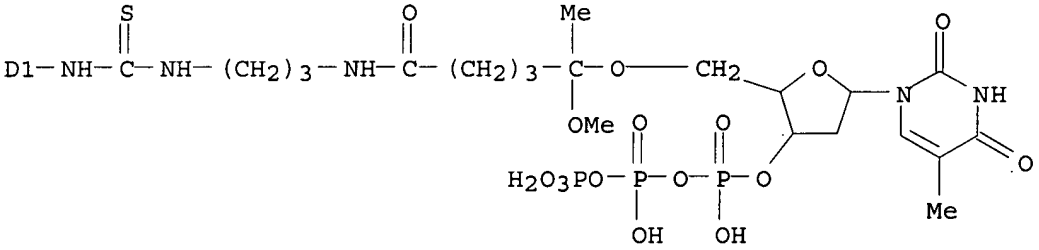


RN 181895-03-4 CAPLUS
CN Thymidine 5'-(tetrahydrogen triphosphate), 3'-O-[5-[[3-[[[[3',6'-dihydroxy-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-5(or 6)-yl]amino]thioxomethyl]amino]propyl]amino]-1-methoxy-1-methyl-5-oxopentyl]-, compd. with N,N-diethylethanamine (1:4) (9CI) (CA INDEX NAME)

CM 1

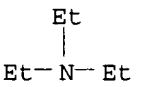
CRN 181895-02-3
CMF C41 H48 N5 O21 P3 S
CCI IDS





CM 2

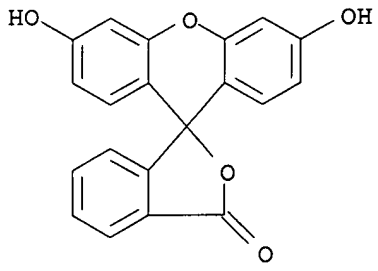
CRN 121-44-8
CMF C6 H15 N

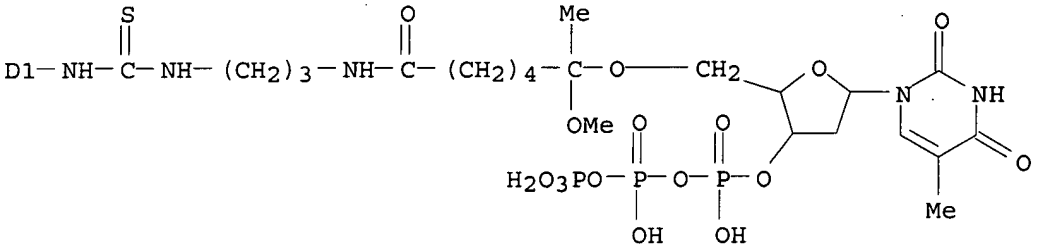


RN 181895-11-4 CAPLUS
CN Thymidine 5'-(tetrahydrogen triphosphate), 3'-O-[6-[[3-[[[[3',6'-dihydroxy-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-5(or 6)-yl]amino]thioxomethyl]amino]propyl]amino]-1-methoxy-1-methyl-6-oxohexyl]-, compd. with N,N-diethylethanamine (1:4) (9CI) (CA INDEX NAME)

CM 1

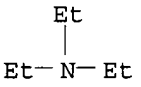
CRN 181895-10-3
CMF C42 H50 N5 O21 P3 S
CCI IDS





CM 2

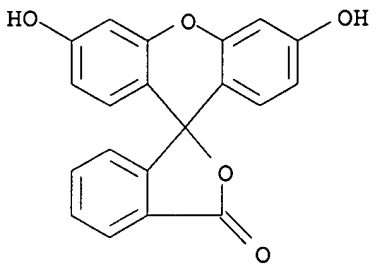
CRN 121-44-8
CMF C6 H15 N

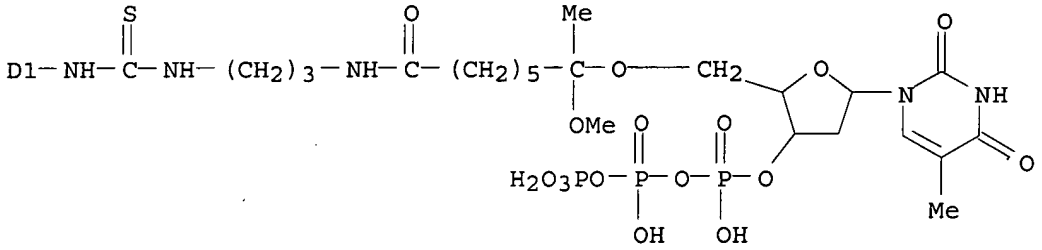


RN 181895-19-2 CAPLUS
CN Thymidine 5'-(tetrahydrogen triphosphate), 3'-O-[7-[[3-[[[[3',6'-dihydroxy-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-5(or 6)-yl]amino]thioxomethyl]amino]propyl]amino]-1-methoxy-1-methyl-7-oxoheptyl]-, compd. with N,N-diethylethanamine (1:4) (9CI) (CA INDEX NAME)

CM 1

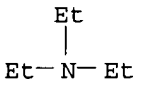
CRN 181895-18-1
CMF C43 H52 N5 O21 P3 S
CCI IDS





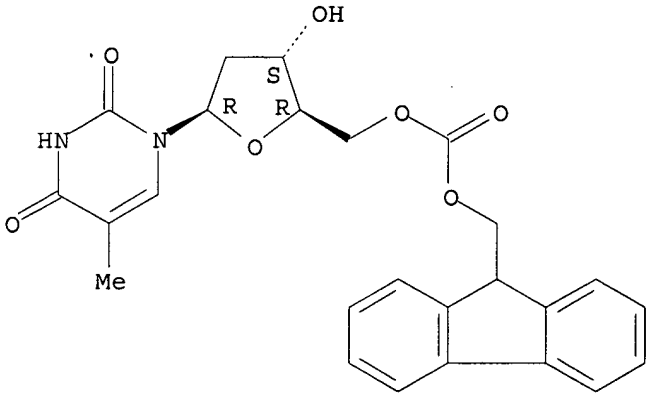
CM 2

CRN 121-44-8
CMF C6 H15 N



IT 83565-25-7 110972-47-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of fluorescent dye-labeled nucleoside triphosphate derivs. as novel chain extension terminators for nucleic acid sequencing)
RN 83565-25-7 CAPLUS
CN Thymidine, 5'-(9H-fluoren-9-ylmethyl carbonate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.

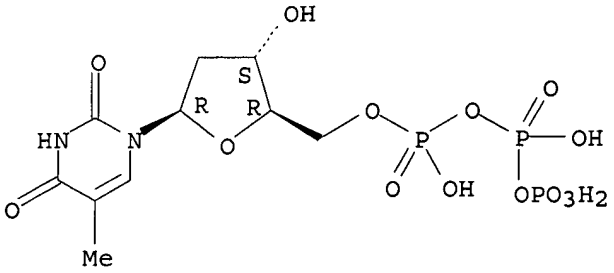


RN 110972-47-9 CAPLUS
CN Thymidine 5'-(tetrahydrogen triphosphate), compd. with N,N-diethylethanamine (1:4) (9CI) (CA INDEX NAME)

CM 1

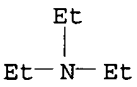
CRN 365-08-2
CMF C10 H17 N2 O14 P3

Absolute stereochemistry.




CM 2

CRN 121-44-8
CMF C6 H15 N



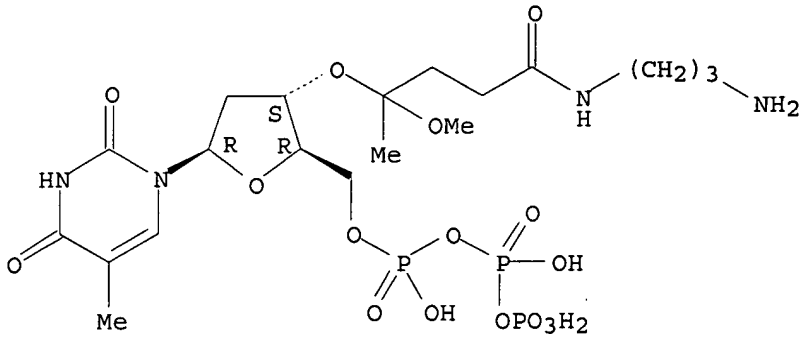

IT 181713-48-4P 181713-63-3P 181713-76-8P
181713-88-2P 181713-91-7P 181713-93-9P
181713-95-1P 181713-97-3P 181713-99-5P
181714-01-2P 181714-03-4P 181714-05-6P
181714-42-1P 181714-44-3P 181714-46-5P
181714-48-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of fluorescent dye-labeled nucleoside triphosphate derivs. as novel chain extension terminators for nucleic acid sequencing)

RN 181713-48-4 CAPLUS
CN Thymidine 5'-(tetrahydrogen triphosphate), 3'-O-[4-[(3-aminopropyl)amino]-1-methoxy-1-methyl-4-oxobutyl]-, compd. with N,N-diethylethanamine (1:4) (9CI) (CA INDEX NAME)

CM 1

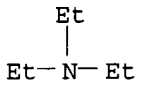
CRN 181713-47-3
CMF C19 H35 N4 O16 P3

Absolute stereochemistry.



CM 2

CRN 121-44-8
CMF C6 H15 N

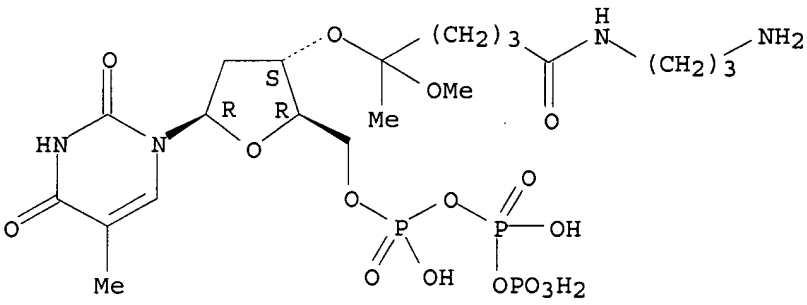


RN 181713-63-3 CAPLUS
CN Thymidine 5'-(tetrahydrogen triphosphate), 3'-O-[5-[(3-aminopropyl)amino]-1-methoxy-1-methyl-5-oxopentyl]-, compd. with N,N-diethylethanamine (1:4) (9CI) (CA INDEX NAME)

CM 1

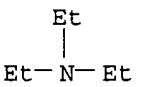
CRN 181713-62-2
CMF C20 H37 N4 O16 P3

Absolute stereochemistry.



CM 2

CRN 121-44-8
CMF C6 H15 N



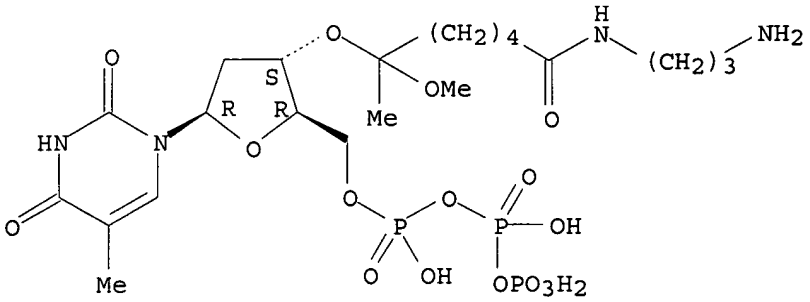
RN 181713-76-8 CAPLUS

CN Thymidine 5'-(tetrahydrogen triphosphate), 3'-O-[6-[(3-aminopropyl)amino]-1-methoxy-1-methyl-6-oxohexyl]-, compd. with N,N-diethylethanamine (1:4) (9CI) (CA INDEX NAME)

CM 1

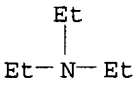
CRN 181713-75-7
CMF C21 H39 N4 O16 P3

Absolute stereochemistry.



CM 2

CRN 121-44-8
CMF C6 H15 N

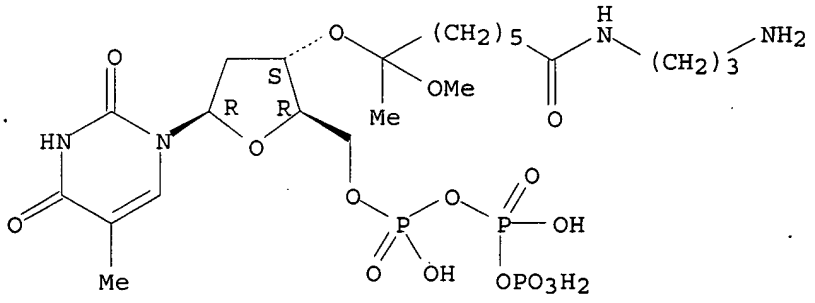


RN 181713-88-2 CAPLUS
CN Thymidine 5'-(tetrahydrogen triphosphate), 3'-O-[7-[(3-aminopropyl)amino]-1-methoxy-1-methyl-7-oxoheptyl]-, compd. with N,N-diethylethanamine (1:4) (9CI) (CA INDEX NAME)

CM 1

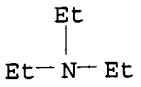
CRN 181713-87-1
CMF C22 H41 N4 O16 P3

Absolute stereochemistry.



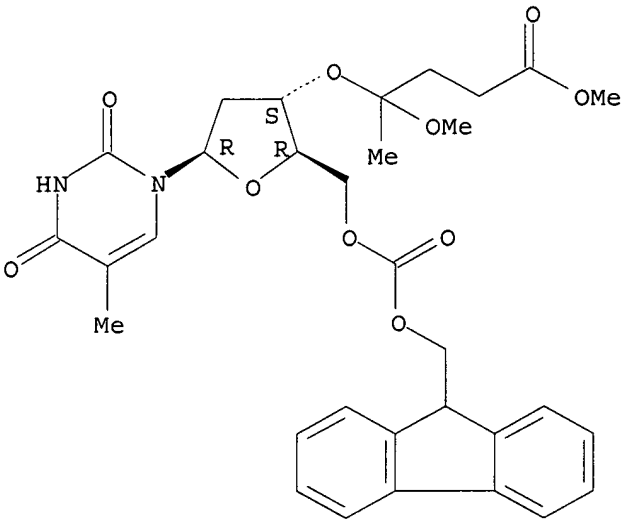
CM 2

CRN 121-44-8
CMF C6 H15 N



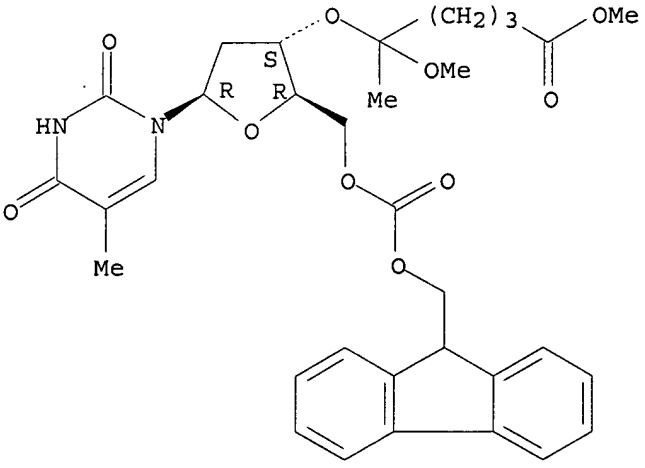
RN 181713-91-7 CAPLUS
CN Thymidine, 3'-O-(1,4-dimethoxy-1-methyl-4-oxobutyl)-, 5'-(9H-fluoren-9-ylmethyl carbonate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



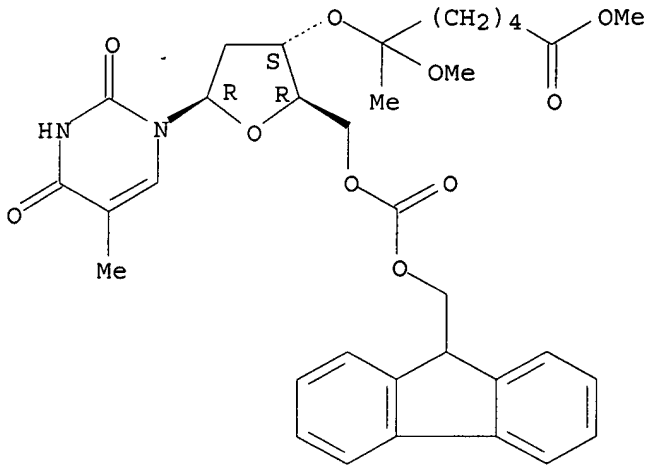
RN 181713-93-9 CAPLUS
CN Thymidine, 3'-O-(1,5-dimethoxy-1-methyl-5-oxopentyl)-, 5'-(9H-fluoren-9-ylmethyl carbonate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



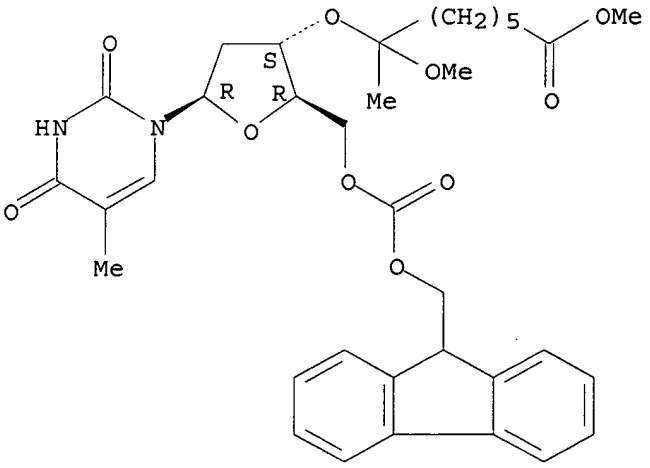
RN 181713-95-1 CAPLUS
CN Thymidine, 3'-O-(1,6-dimethoxy-1-methyl-6-oxohexyl)-, 5'-(9H-fluoren-9-ylmethyl carbonate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



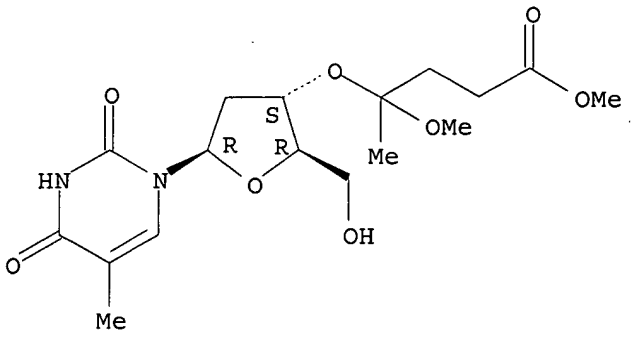
RN 181713-97-3 CAPLUS
CN Thymidine, 3'-O-(1,7-dimethoxy-1-methyl-7-oxoheptyl)-, 5'-(9H-fluoren-9-ylmethyl carbonate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



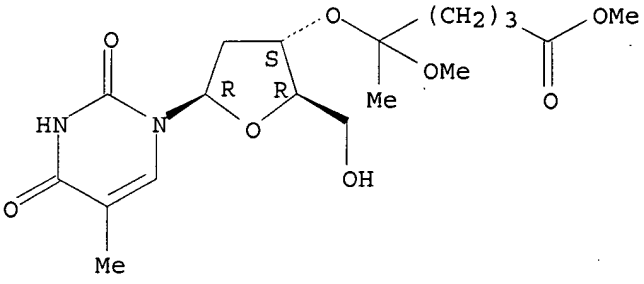
RN 181713-99-5 CAPLUS
CN Thymidine, 3'-O-(1,4-dimethoxy-1-methyl-4-oxobutyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



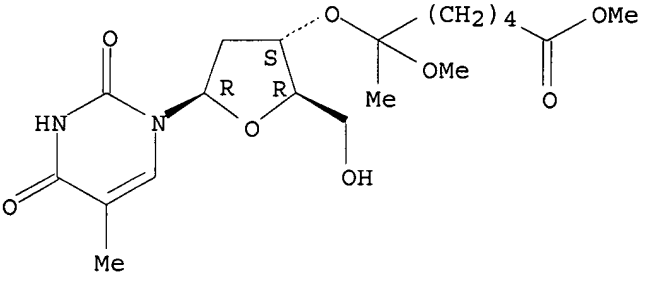
RN 181714-01-2 CAPLUS
CN Thymidine, 3'-O-(1,5-dimethoxy-1-methyl-5-oxopentyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



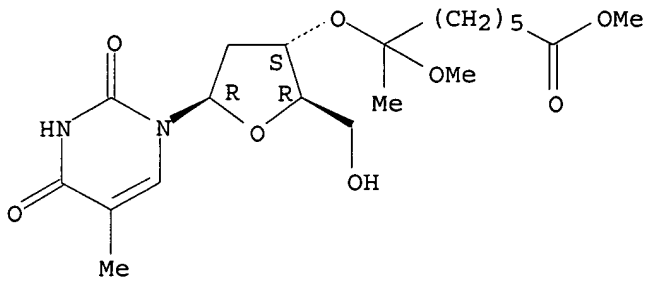
RN 181714-03-4 CAPLUS
CN Thymidine, 3'-O-(1,6-dimethoxy-1-methyl-6-oxohexyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 181714-05-6 CAPLUS
CN Thymidine, 3'-O-(1,7-dimethoxy-1-methyl-7-oxoheptyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

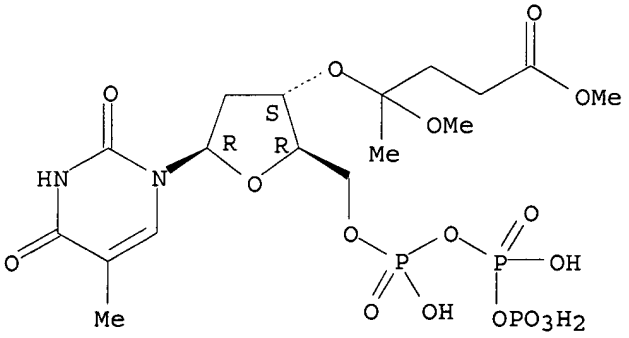


RN 181714-42-1 CAPLUS
CN Thymidine 5'-(tetrahydrogen triphosphate), 3'-O-(1,4-dimethoxy-1-methyl-4-oxobutyl)-, compd. with N,N-diethylethanamine (1:4) (9CI) (CA INDEX NAME)

CM 1

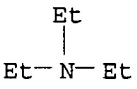
CRN 181714-41-0
CMF C17 H29 N2 O17 P3

Absolute stereochemistry.



CM 2

CRN 121-44-8
CMF C6 H15 N

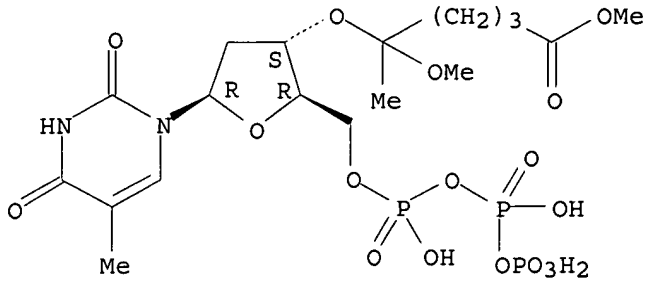


RN 181714-44-3 CAPLUS
CN Thymidine 5'-(tetrahydrogen triphosphate), 3'-O-(1,5-dimethoxy-1-methyl-5-oxopentyl)-, compd. with N,N-diethylethanamine (1:4) (9CI) (CA INDEX NAME)

CM 1

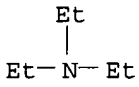
CRN 181714-43-2
CMF C18 H31 N2 O17 P3

Absolute stereochemistry.



CM 2

CRN 121-44-8
CMF C6 H15 N

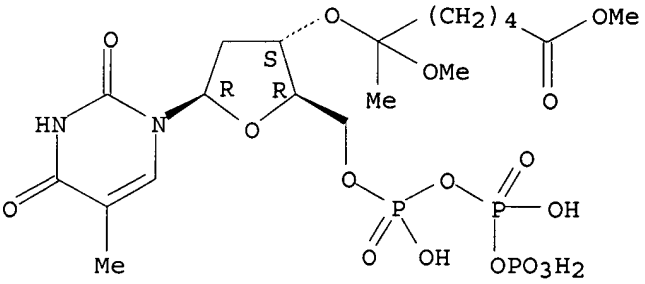


RN 181714-46-5 CAPLUS
CN Thymidine 5'-(tetrahydrogen triphosphate), 3'-O-(1,6-dimethoxy-1-methyl-6-oxohexyl)-, compd. with N,N-diethylethanamine (1:4) (9CI) (CA INDEX NAME)

CM 1

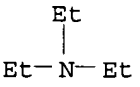
CRN 181714-45-4
CMF C19 H33 N2 O17 P3

Absolute stereochemistry.



CM 2

CRN 121-44-8
CMF C6 H15 N

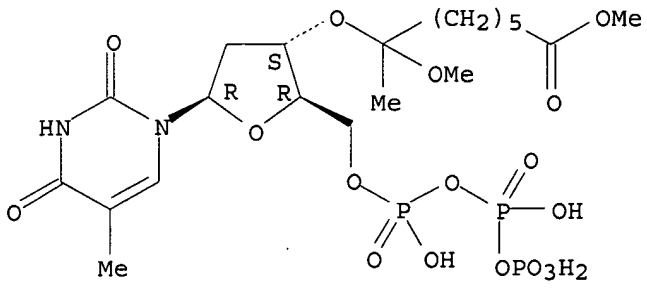


RN 181714-48-7 CAPLUS
CN Thymidine 5'-(tetrahydrogen triphosphate), 3'-O-(1,7-dimethoxy-1-methyl-7-oxoheptyl)-, compd. with N,N-diethylethanamine (1:4) (9CI) (CA INDEX NAME)

CM 1

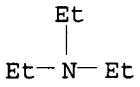
CRN 181714-47-6
CMF C20 H35 N2 O17 P3

Absolute stereochemistry.



CM 2

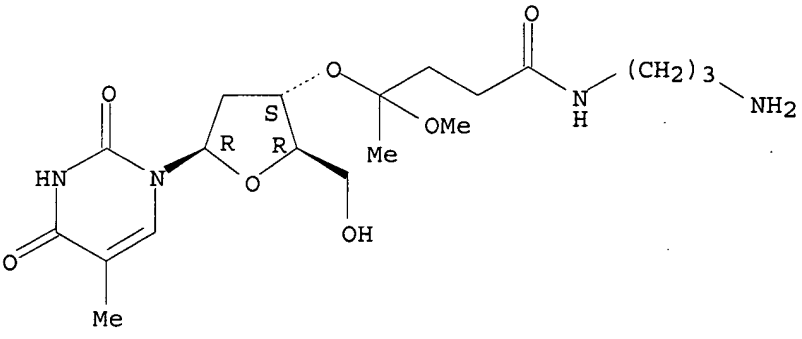
CRN 121-44-8
CMF C6 H15 N



IT 181713-29-1P 181713-31-5P 181713-34-8P
181713-35-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of fluorescent dye-labeled nucleoside triphosphate derivs. as novel chain extension terminators for nucleic acid sequencing)

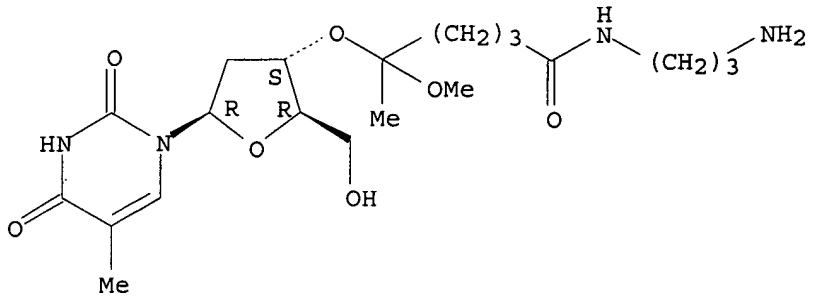
RN 181713-29-1 CAPLUS
CN Thymidine, 3'-O-[4-[(3-aminopropyl)amino]-1-methoxy-1-methyl-4-oxobutyl]-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



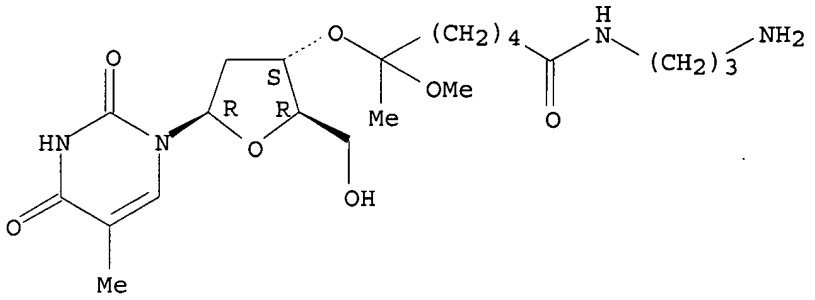
RN 181713-31-5 CAPLUS
CN Thymidine, 3'-O-[5-[(3-aminopropyl)amino]-1-methoxy-1-methyl-5-oxopentyl]-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



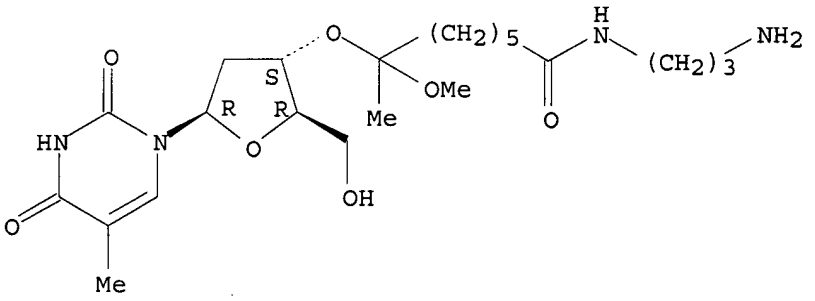
RN 181713-34-8 CAPLUS
CN Thymidine, 3'-O-[6-[(3-aminopropyl)amino]-1-methoxy-1-methyl-6-oxohexyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



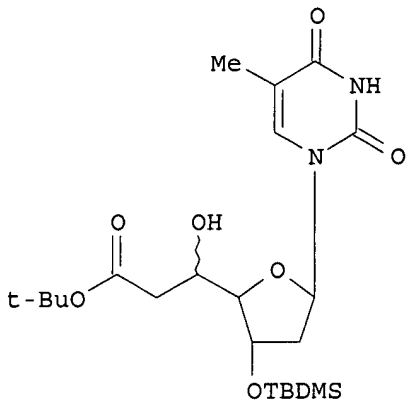
RN 181713-35-9 CAPLUS
CN Thymidine, 3'-O-[7-[(3-aminopropyl)amino]-1-methoxy-1-methyl-7-oxoheptyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L5 ANSWER 20 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1996:427235 CAPLUS
DN 125:196208
TI Stereoselective synthesis of C-5'-substituted thymidine
AU Escudier, Jean-Marc; Tworkowski, Isabelle; Bouziani, Leila; Gorrichon, Liliane
CS Lab. Synthese Physicochimie Organique Associe, Univ. Paul Sabatier, Toulouse, 31062, Fr.
SO Tetrahedron Letters (1996), 37(27), 4689-4692
CODEN: TELEAY; ISSN: 0040-4039
PB Elsevier
DT Journal

LA French
OS CASREACT 125:196208
GI



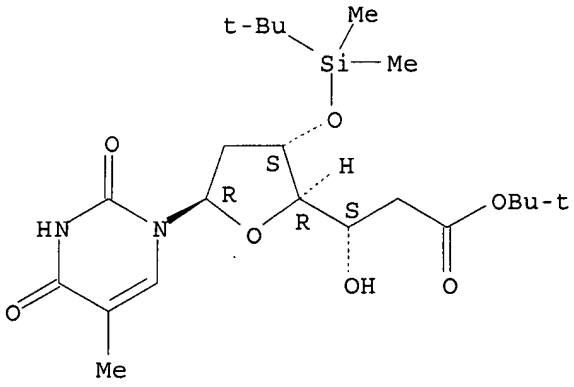
I

AB Stereocontrolled enolate addition on thymidine C-5' aldehydes provides functionalized nucleosides, e.g. I. After appropriate protections of the hydroxyl functions, and reduction of the carbonyl function these "armed" nucleosides can be tosylated to permit subsequent modification on the oligodeoxyribonucleotide in which they could be incorporated.

IT 181035-00-7P 181035-09-6P 181035-11-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(stereoselective enolate addn on thymidine aldehydes)

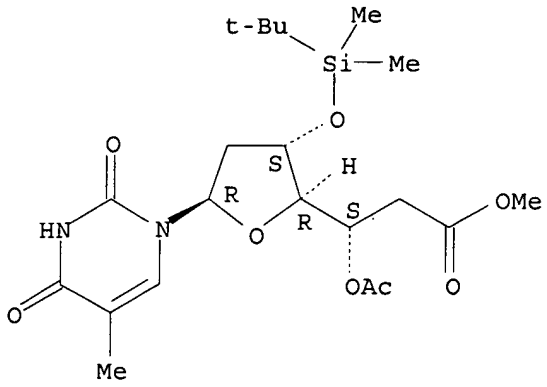
RN 181035-00-7 CAPLUS
CN α-L-lyxo-Heptofuranuronic acid, 1,2,6-trideoxy-1-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-3-O-[(1,1-dimethylethyl)dimethylsilyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



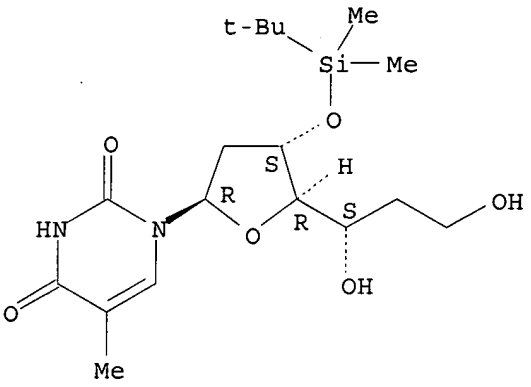
RN 181035-09-6 CAPLUS
CN α-L-lyxo-Heptofuranuronic acid, 1,2,6-trideoxy-1-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-3-O-[(1,1-dimethylethyl)dimethylsilyl]-, methyl ester, 5-acetate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



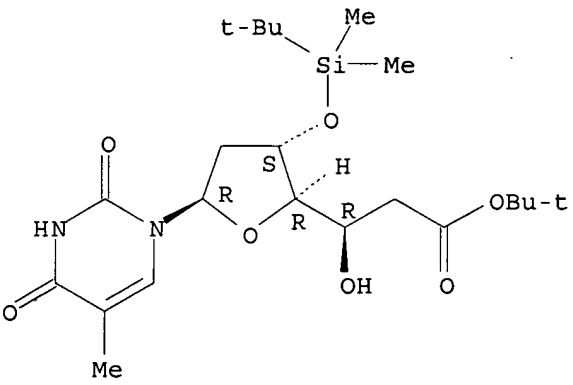
RN 181035-11-0 CAPLUS
CN 2,4(1H,3H)-Pyrimidinedione, 1-[2,6-dideoxy-3-O-[(1,1-dimethylethyl)dimethylsilyl]-α-L-lyxo-heptofuranosyl]-5-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



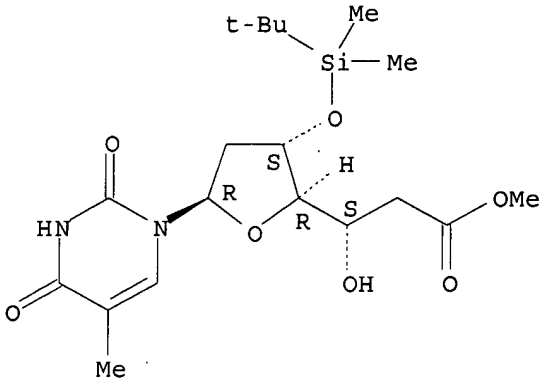
IT 181035-01-8P 181035-04-1P 181035-05-2P
181035-06-3P 181035-07-4P 181035-13-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(stereoselective enolate addn on thymidine aldehydes)
RN 181035-01-8 CAPLUS
CN β-D-ribo-Heptofuranuronic acid, 1,2,6-trideoxy-1-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-3-O-[(1,1-dimethylethyl)dimethylsilyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



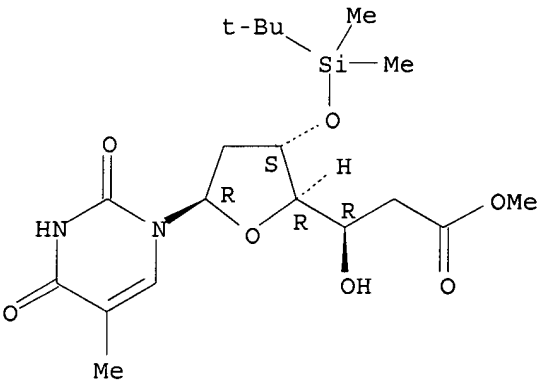
RN 181035-04-1 CAPLUS
CN α-L-lyxo-Heptofuranuronic acid, 1,2,6-trideoxy-1-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-3-O-[(1,1-dimethylethyl)dimethylsilyl]-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



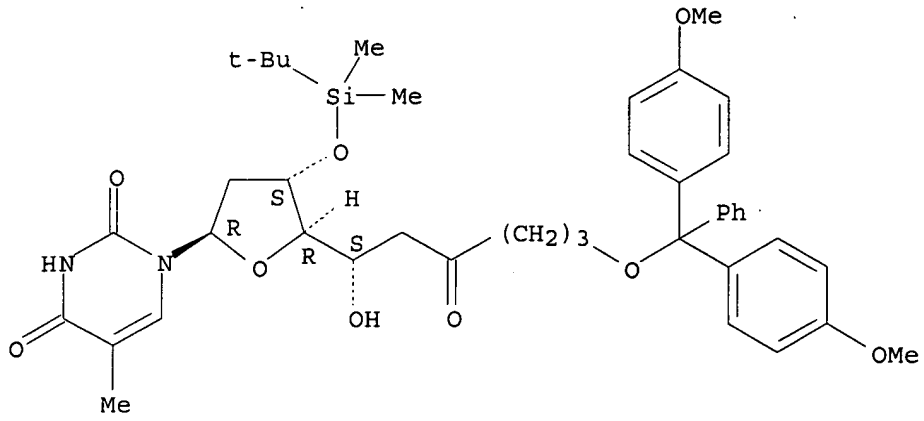

RN 181035-05-2 CAPLUS
CN β-D-ribo-Heptofuranuronic acid, 1,2,6-trideoxy-1-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-3-O-[(1,1-dimethylethyl)dimethylsilyl]-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



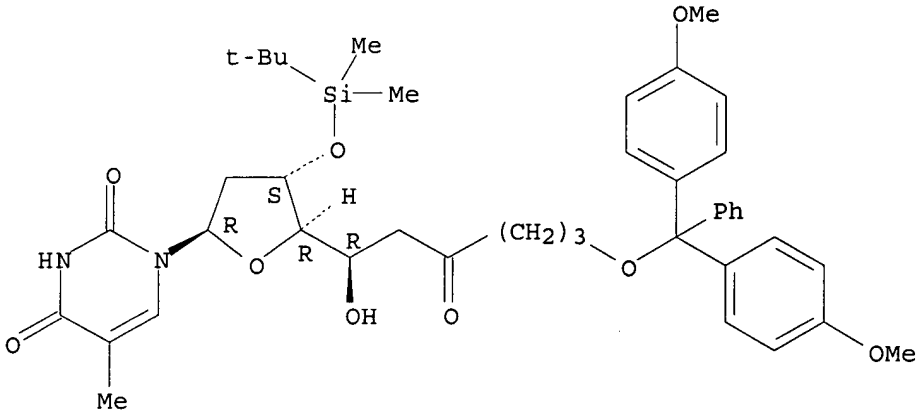

RN 181035-06-3 CAPLUS
CN 2,4(1H,3H)-Pyrimidinedione, 1-[5-[6-[bis(4-methoxyphenyl)phenylmethoxy]-1-hydroxy-3-oxohexyl]-4-[[(1,1-dimethylethyl)dimethylsilyl]oxy]tetrahydro-2-furanyl]-5-methyl-, [2R-[2α,4β,5α(S*)]]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



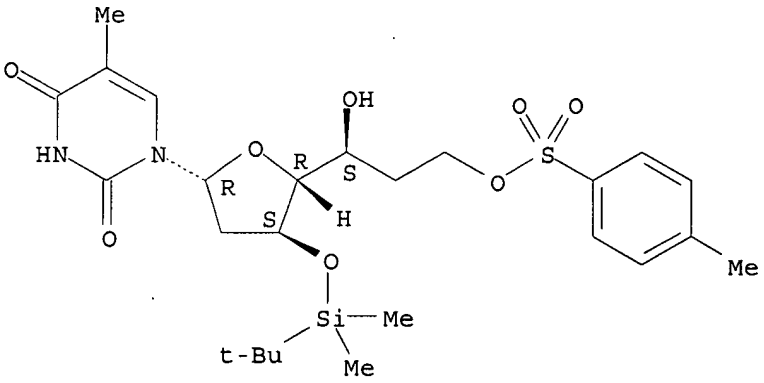
RN 181035-07-4 CAPLUS
CN 2,4(1H,3H)-Pyrimidinedione, 1-[5-[6-[bis(4-methoxyphenyl)phenylmethoxy]-1-hydroxy-3-oxohexyl]-4-[[(1,1-dimethylethyl)dimethylsilyl]oxy]tetrahydro-2-furanyl]-5-methyl-, [2R-[2α,4β,5α(R*)]]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



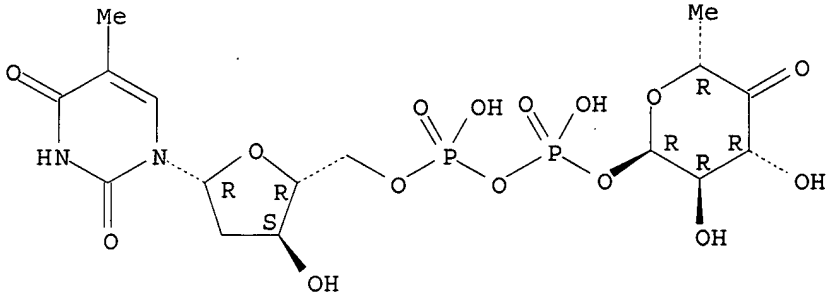
RN 181035-13-2 CAPLUS
CN 2,4(1H,3H)-Pyrimidinedione, 1-[2,6-dideoxy-3-O-[(1,1-dimethylethyl)dimethylsilyl]-7-O-[(4-methylphenyl)sulfonyl]-α-L-lyxo-heptofuranosyl]-5-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



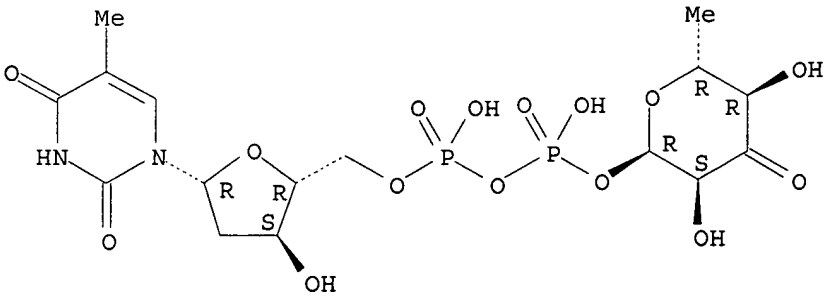
L5 ANSWER 21 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1996:402511 CAPLUS
DN 125:168553
TI Substrate specificity of native dTDP-D-glucose-4,6-dehydratase: chemo-enzymic syntheses of artificial and naturally occurring deoxy sugars
AU Naundorf, Andreas; Klaffke, Werner
CS Inst. Org. Chemie, Univ. Hamburg, Hamburg, D-20146, Germany
SO Carbohydrate Research (1996), 285, 141-150
CODEN: CRBRAT; ISSN: 0008-6215
PB Elsevier
DT Journal
LA English
AB Incubation of dTDP-glucose with the enzyme dTDP-glucose-4,6-dehydratase [EC 4.2.1.46] from wild type E. coli B yielded a mixture of 3- and 4-keto-6-deoxy sugars after work-up. Model expts. with chemical synthesized Me 6-deoxy-4-keto-glucoside revealed that dTDP-6-deoxy-α-D-ribo-hexopyran-3-ulose is formed by keto-enol tautomerization during the isolation procedure from initially formed dTDP-6-deoxy-α-D-xylo-hexopyran-4-ulose.
IT 16752-71-9P 171090-34-9P 180403-80-9P
180403-81-0P
RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)
(dehydratase-catalyzed deoxygenation of nucleotide glucopyranose)
RN 16752-71-9 CAPLUS
CN Thymidine 5'-(trihydrogen diphosphate), P'-(6-deoxy-α-D-xylo-hexopyranos-4-ulos-1-yl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



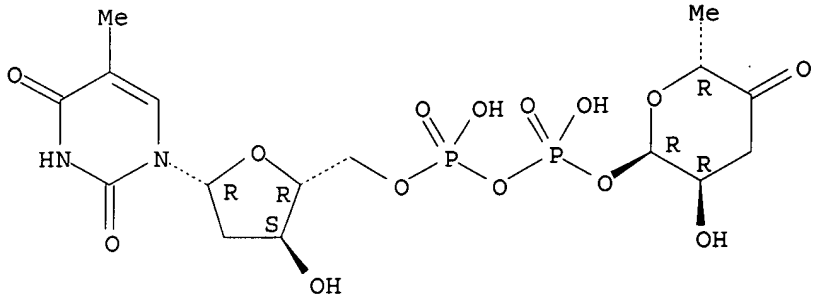
RN 171090-34-9 CAPLUS
CN Thymidine 5'-(trihydrogen diphosphate), P'-(6-deoxy-α-D-ribo-hexopyranos-3-ulos-1-yl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



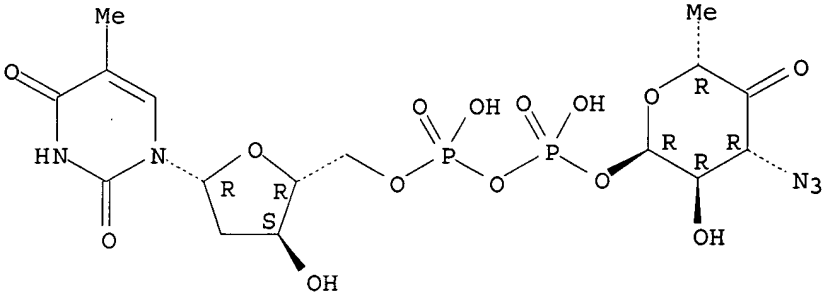
RN 180403-80-9 CAPLUS
CN Thymidine 5'-(trihydrogen diphosphate), P'-(3,6-dideoxy-α-D-erythro-hexopyranos-4-ulos-1-yl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



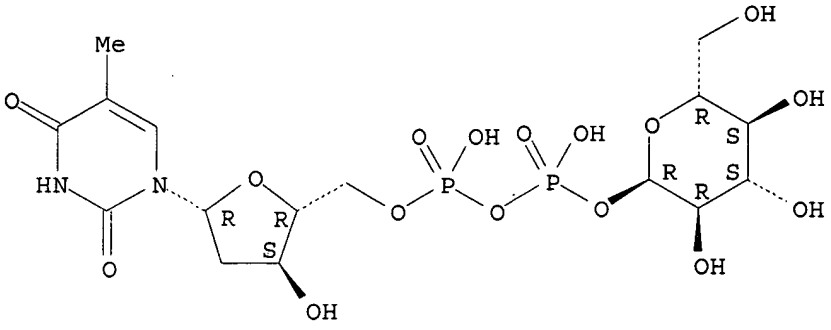
RN 180403-81-0 CAPLUS
CN Thymidine 5'-(trihydrogen diphosphate), P'-(3-azido-3,6-dideoxy-α-D-xylo-hexopyranos-4-ulos-1-yl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 148296-43-9 171555-04-7 180403-79-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(dehydratase-catalyzed deoxygenation of nucleotide glucopyranose)
RN 148296-43-9 CAPLUS
CN Thymidine 5'-(trihydrogen diphosphate), P'-α-D-glucopyranosyl ester, disodium salt (9CI) (CA INDEX NAME)

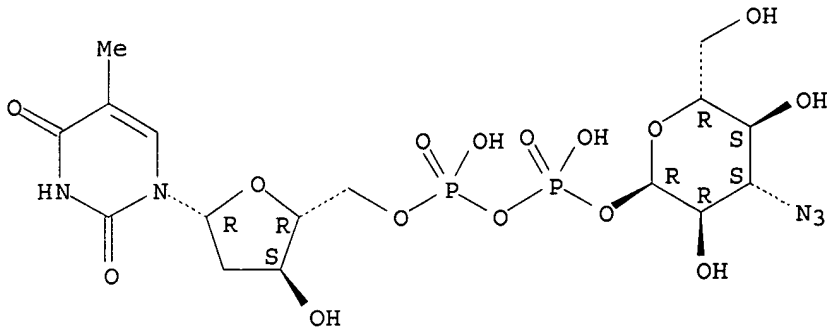
Absolute stereochemistry.



●2 Na

RN 171555-04-7 CAPLUS
CN Thymidine 5'-(trihydrogen diphosphate), P'-(3-azido-3-deoxy-α-D-glucopyranosyl) ester, disodium salt (9CI) (CA INDEX NAME)

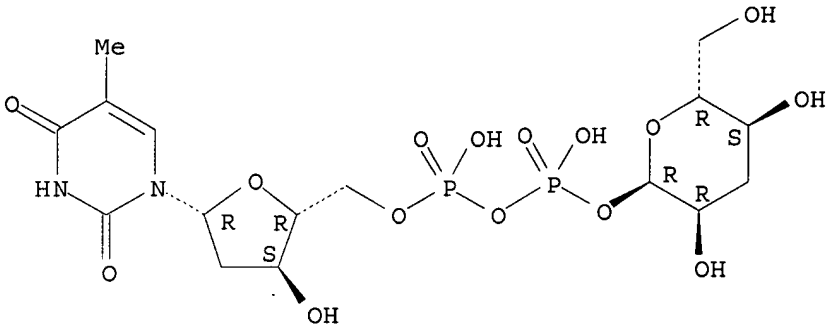
Absolute stereochemistry.



●2 Na

RN 180403-79-6 CAPLUS
CN Thymidine 5'-(trihydrogen diphosphate), P'-(3-deoxy-α-D-ribo-hexopyranosyl) ester (9CI) (CA INDEX NAME)

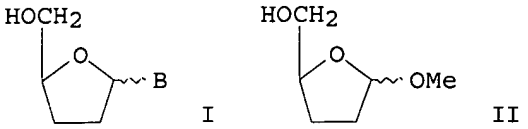
Absolute stereochemistry.



L5 ANSWER 22 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1993:671638 CAPLUS
DN 119:271638
TI Process for the synthesis of 2',3'-dideoxynucleosides
IN Jung, Michael E.; Gardiner, John M.
PA University of California, Oakland, USA
SO U.S., 10 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI US 5220003 | A | 19930615 | US 1991-677500 | 19910329 |
| PRAI US 1991-677500 | | 19910329 | | |

OS CASREACT 119:271638; MARPAT 119:271638
GI




I II

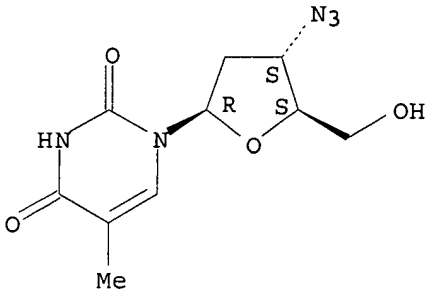
AB A process for making 2',3'-dideoxynucleosides I (B = purine or pyrimidine base) comprises the steps of a) converting HOCH2CH(OH)CH2CH2CH(OMe)2 to a dideoxyribofuranoside II, and b) coupling a purine or pyrimidine base to II. Thus, crotonaldehyde was converted into Me α- and β-3-azido-2,3-dideoxyribofuranoside (6 steps), which was silylated with Me3CPh2SiCl-imidazole in DMF and then converted into D-β-3'-azido-3'-deoxythymidine and D-α-3'-azido-3'-deoxythymidine by a reference procedure.

IT 30516-87-1P 66323-40-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 30516-87-1 CAPLUS

CN Thymidine, 3'-azido-3'-deoxy- (7CI, 8CI, 9CI) (CA INDEX NAME)

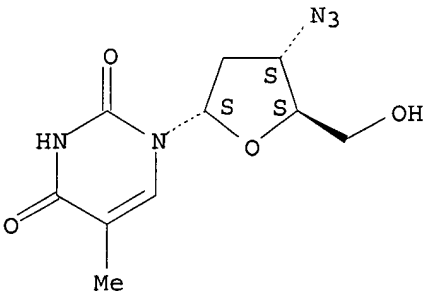
Absolute stereochemistry. Rotation (+).




RN 66323-40-8 CAPLUS

CN 2,4(1H,3H)-Pyrimidinedione, 1-(3-azido-2,3-dideoxy-α-D-erythro-pentofuranosyl)-5-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).




L5 ANSWER 23 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1992:470238 CAPLUS

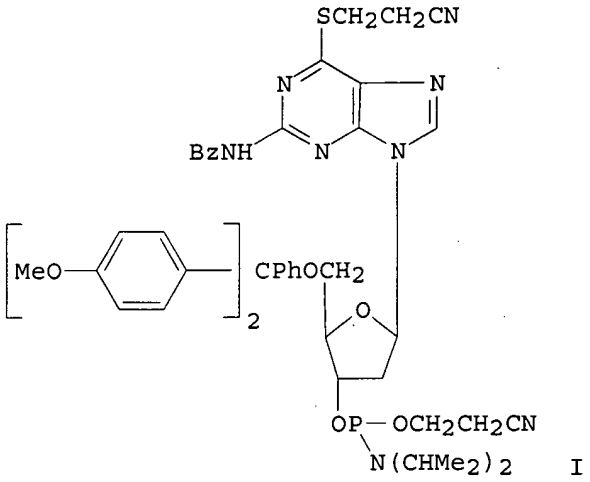
DN 117:70238

TI Straightforward synthesis of 6-thiodeoxyguanosine and its incorporation into oligodeoxynucleotides

AU Waters, Timothy R.; Connolly, Bernard A.

CS Dep. Biochem., Univ. Southampton, Southampton, S09 3TU, UK

SO Nucleosides & Nucleotides (1992), 11(5), 985-98
CODEN: NUNUD5; ISSN: 0732-8311
DT Journal
LA English
OS CASREACT 117:70238
GI




I

AB 6-Thiodeoxyguanosine was prepared from deoxyguanosine via treatment of its enol triisopropylbenzenesulfonate with Li2S. 6-Thiodeoxyguanosine was converted into the phosphoramidite I which was incorporated into oligodeoxynucleotides.

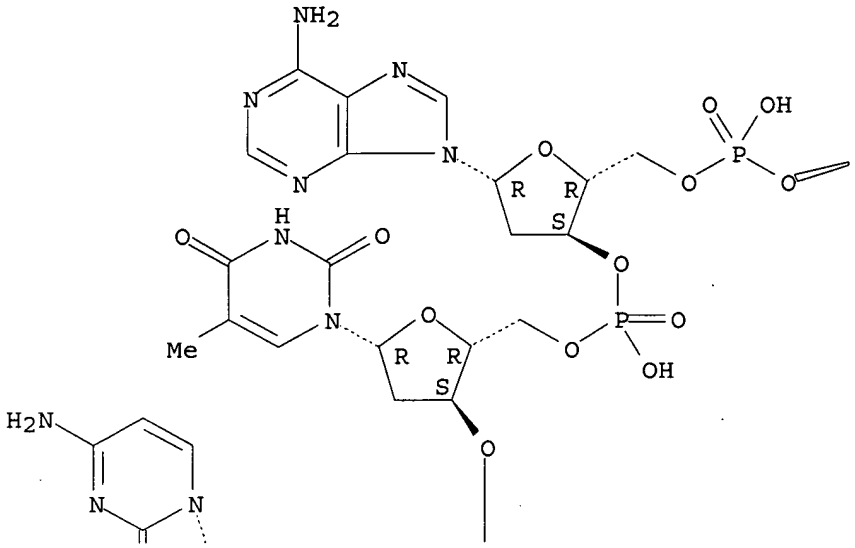
IT 142574-97-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 142574-97-8 CAPLUS

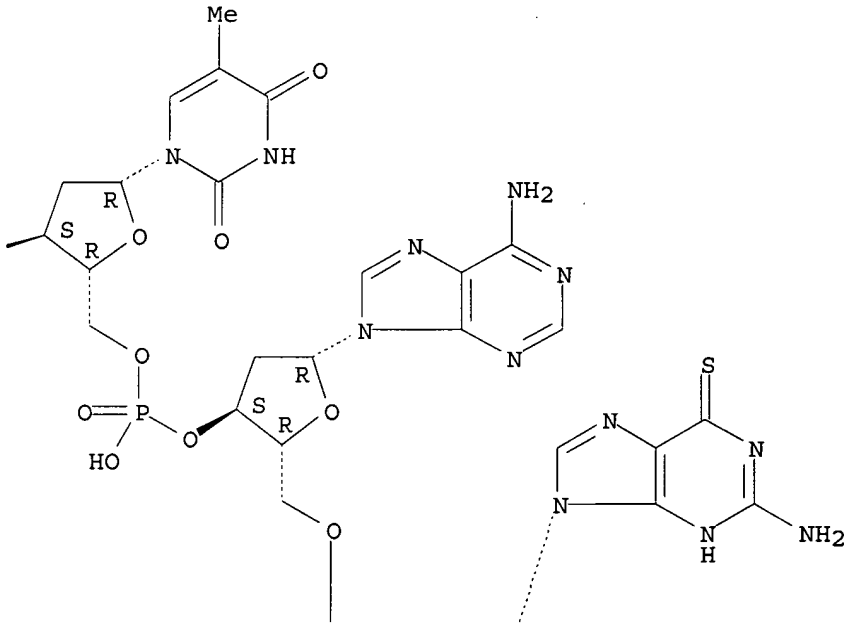
CN Guanosine, 2'-deoxycytidylyl-(5'→3')-thymidylyl-(5'→3')-2'-deoxyguanylyl-(5'→3')-2'-deoxycytidylyl-(5'→3')-thymidylyl-(5'→3')-2'-deoxyadenylyl-(5'→3')-thymidylyl-(5'→3')-2'-deoxyadenylyl-(5'→3')-2'-deoxy-6-thioguanylyl-(5'→3')-2'-deoxycytidylyl-(5'→3')-2'-deoxyadenylyl-(5'→3')-2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

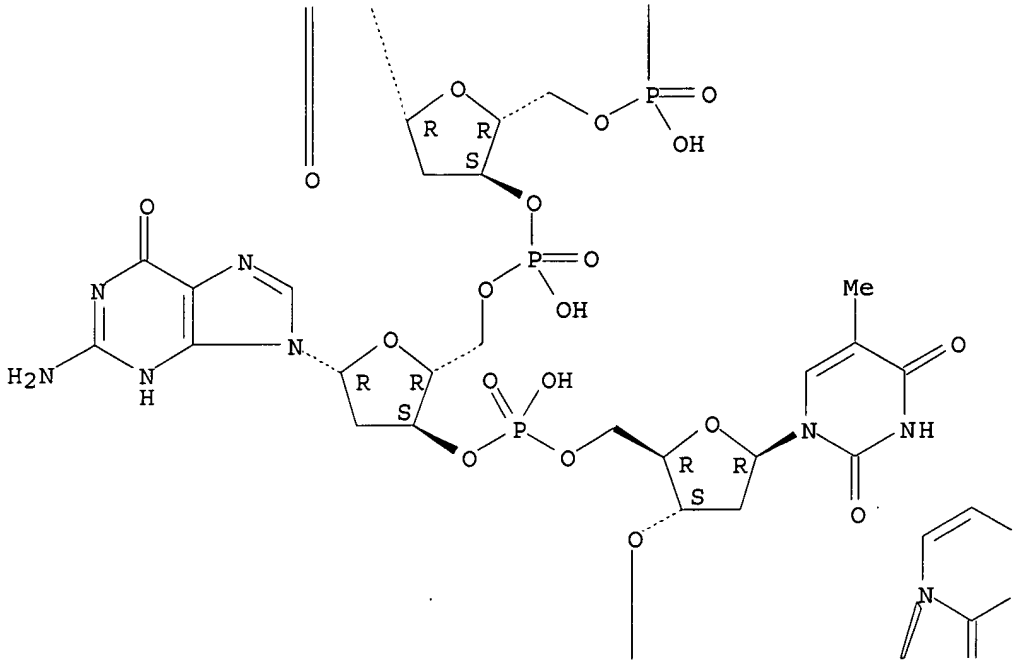
PAGE 1-A



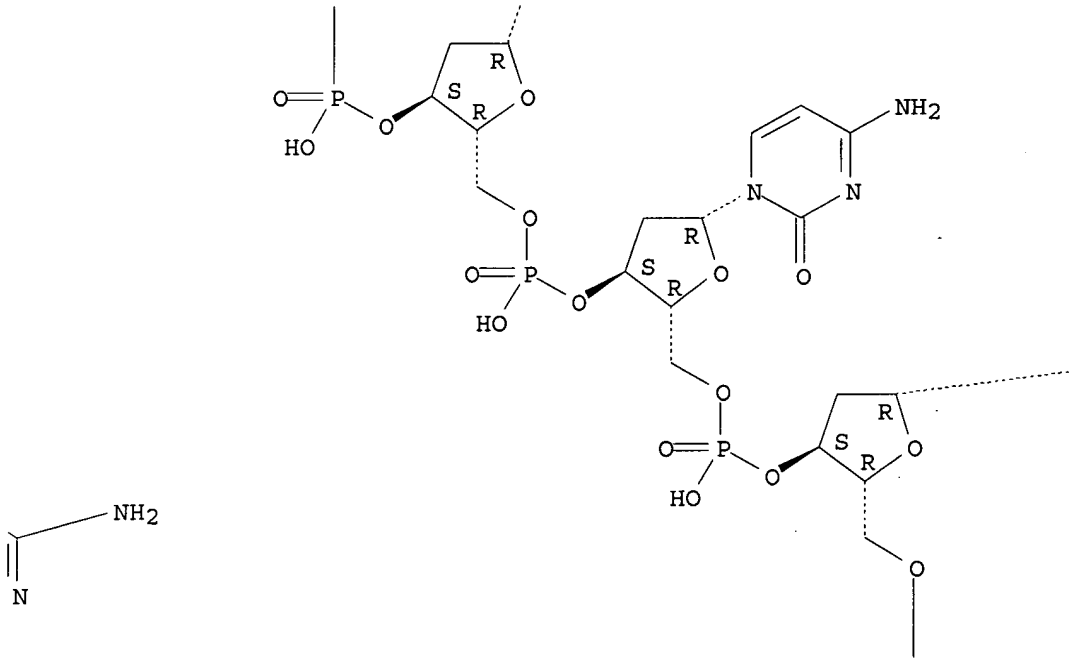
PAGE 1-B



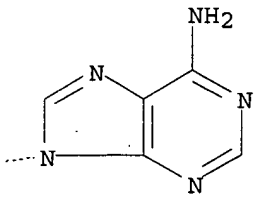
PAGE 2-A



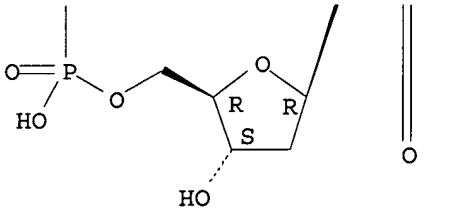
PAGE 2-B



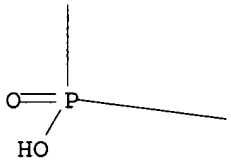
PAGE 2-C



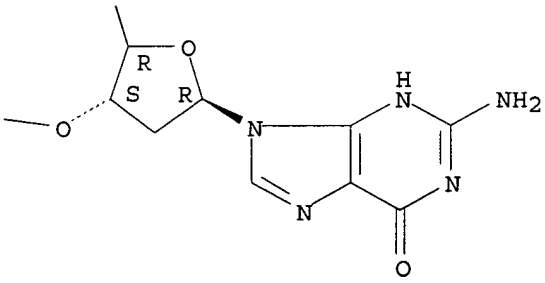
PAGE 3-A



PAGE 3-B



PAGE 3-C



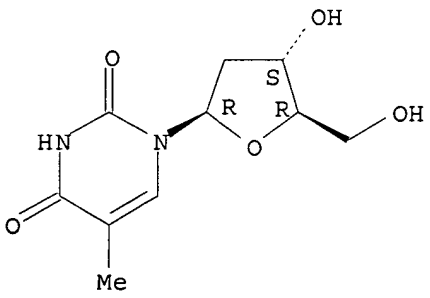
L5 ANSWER 24 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1991:5485 CAPLUS
DN 114:5485
TI Enantio- and regioselective syntheses of organic compounds using enol esters as irreversible transacylation reagents
IN Wong, Chi Huey; Wang, Yi Fong; Hennen, William J.; Babiak, Kevin Anthony
PA G.D. Searle and Co., USA
SO Eur. Pat. Appl., 27 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | EP 357009 | A2 | 19900307 | EP 1989-115956 | 19890830 |
| | EP 357009 | A3 | 19901219 | | |
| | EP 357009 | B1 | 19940302 | | |
| | R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE | | | | |
| | US 5106750 | A | 19920421 | US 1989-396723 | 19890824 |
| | JP 02167098 | A2 | 19900627 | JP 1989-224323 | 19890830 |
| | JP 2843606 | B2 | 19990106 | | |
| | EP 560408 | A1 | 19930915 | EP 1993-107522 | 19890830 |
| | EP 560408 | B1 | 20000405 | | |
| | R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE | | | | |
| | AT 102255 | E | 19940315 | AT 1989-115956 | 19890830 |
| | ES 2061844 | T3 | 19941216 | ES 1989-115956 | 19890830 |
| | AT 191509 | E | 20000415 | AT 1993-107522 | 19890830 |
| | ES 2145017 | T3 | 20000701 | ES 1993-107522 | 19890830 |
| | CA 1341217 | A1 | 20010424 | CA 1989-609932 | 19890830 |
| | US 5585252 | A | 19961217 | US 1994-309716 | 19940921 |
| | GR 3033718 | T3 | 20001031 | GR 2000-401408 | 20000616 |
| PRAI | US 1988-238358 | A | 19880830 | | |
| | US 1989-396723 | A | 19890824 | | |
| | EP 1989-115956 | A | 19890830 | | |
| | US 1991-704687 | B1 | 19910517 | | |
| | US 1992-945196 | B1 | 19920915 | | |

AB A method for preparation of enantio- and regioselective enzyme-catalyzed acylation of alcs. by using enol esters is described. Sugars, nucleosides and glycosides are also regioselectively acylated. The enol obtained tautomerizes to the carbonyl compound, thus preventing the reverse reaction from occurring. Thus, glycidol, was allowed to react with vinyl propionate in CHCl3 and toluene in the presence of pancreatic lipase to give the (S)-ester.

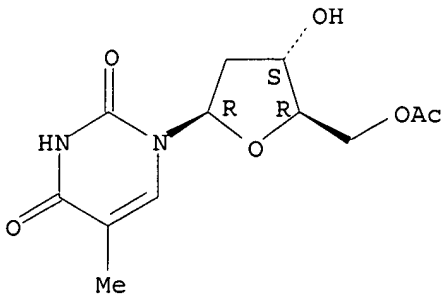
IT 50-89-5, Thymidine, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(acylation of, regioselective, enzyme-catalyzed)
RN 50-89-5 CAPLUS
CN Thymidine (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

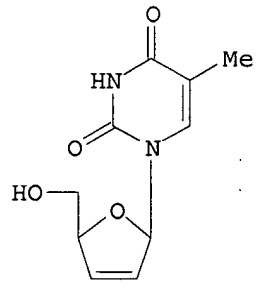


IT 35898-31-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, by regioselective acylation)
RN 35898-31-8 CAPLUS
CN Thymidine, 5'-acetate (7CI, 9CI) (CA INDEX NAME)

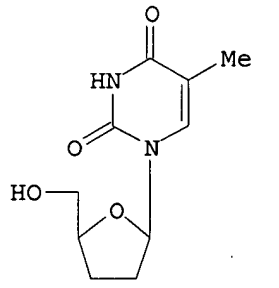
Absolute stereochemistry.



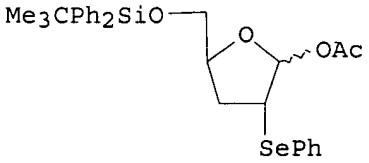
L5 ANSWER 25 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1990:139728 CAPLUS
DN 112:139728
TI A highly stereoselective glycosylation of 2-(phenylselenenyl)-2,3-dideoxyribose derivative with thymine: synthesis of 3'-deoxy-2',3'-didehydrothymidine and 3'-deoxythymidine
AU Chu, Chung K.; Babu, J. Ramesh; Beach, J. Warren; Ahn, Soon K.; Huang, Haoqiang; Jeong, Lak S.; Lee, Sang J.
CS Coll. Pharm., Univ. Georgia, Athens, GA, 30602, USA
SO Journal of Organic Chemistry (1990), 55(5), 1418-20
CODEN: JOCEAH; ISSN: 0022-3263
DT Journal
LA English
OS CASREACT 112:139728
GI



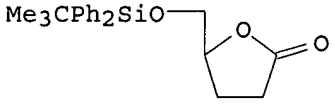
I



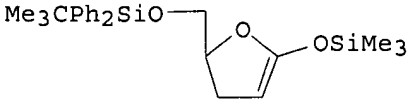
II



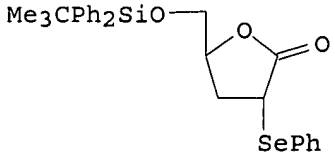
III



IV



V



VI

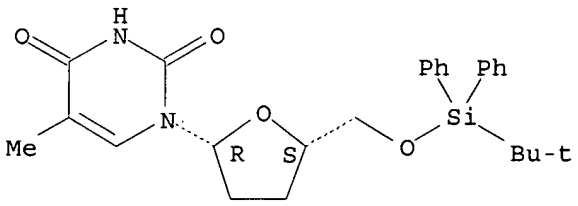
AB A highly stereoselective synthesis of deoxydidehydrothymidine (I) and deoxythymidine (II) was achieved by condensing dideoxyribose derivative III with silylated thymine in the presence of trimethylsilyl triflate. III was prepared in three steps from ribonolactone IV. Selenenylation of IV via its trimethylsilyl enol derivative V and separation of the major isomer VI , followed by DIBAL reduction and acetylation gave III. The high stereoselective glycosylation obtained (β/α >99/1) was attributed to the neighboring group participation of 2-phenylselenenyl group. The condensed product thus obtained gave I upon oxidative removal of the phenylselenenyl group, followed by desilylation. Similarly, II was obtained by reductive removal of the phenylselenenyl group (Bu3SnH-Et3B), followed by desilylation.

IT 121687-74-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and desilylation of)

RN 121687-74-9 CAPLUS

CN 2,4(1H,3H)-Pyrimidinedione, 1-[5-[[[(1,1-dimethylethyl)diphenylsilyl]oxy]methyl]tetrahydro-2-furanyl]-5-methyl-, (2R-cis)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

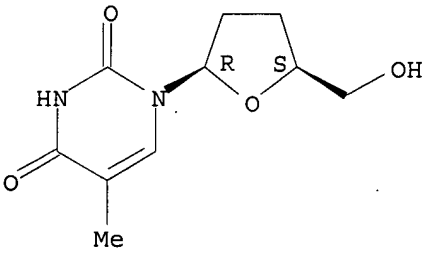



IT 3416-05-5P, 3'-Deoxythymidine
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, as a potential AIDS inhibitor)

RN 3416-05-5 CAPLUS

CN Thymidine, 3'-deoxy- (7CI, 8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).




L5 ANSWER 26 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1986:14611 CAPLUS

DN 104:14611

TI Mechanism of bleomycin: evidence for 4'-ketone formation in poly(dA-dU) associated exclusively with free base release

AU Wu, John C.; Stubbe, JoAnne; Kozarich, John W.

CS Sch. Med., Yale Univ., New Haven, CT, 06510, USA

SO Biochemistry (1985), 24(26), 7569-73
CODEN: BICHAW; ISSN: 0006-2960

DT Journal

LA English

AB Incubation of 3H-labeled poly(dA-dU) [26780-70-1] (radiolabeled in the 3'

or 5' position) or 3H-labeled poly(dA-dT) [25464-54-4] (radiolabeled in the 5' position) under a variety of conditions with activated bleomycin [11056-06-7] resulted in the prodn. of free nucleic acid base, base propenal, and a small amount of 3H2O. Adjustment of the terminated reaction mixture to pH 10 and incubation at 95° resulted in a time-dependent increase in 3H2O to an amount equal to the amount of free base. If the terminated reaction mixture was incubated with NaBH4 prior to the heat and alkaline treatment, the release of 3H2O was inhibited. These results are consistent with the generation by activated bleomycin of a 4'-ketone-yielding free base, with the exchange of the 3'- and 5'-H by enolization and with the alkaline-induced strand scission occurring from this intermediate.

IT 25464-54-4
RL: PRP (Properties)
(degradation of, by bleomycin, ketone formation and free base release in)

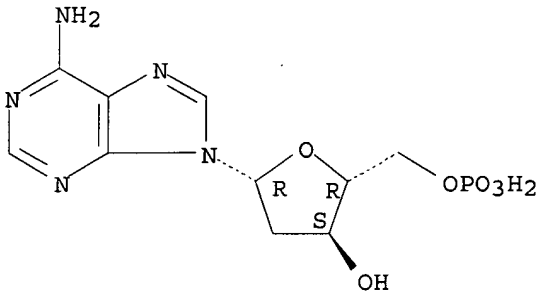
RN 25464-54-4 CAPLUS

CN 5'-Adenylic acid, 2'-deoxy-, polymer with 5'-thymidylic acid (9CI) (CA INDEX NAME)

CM 1

CRN 653-63-4
CMF C10 H14 N5 O6 P

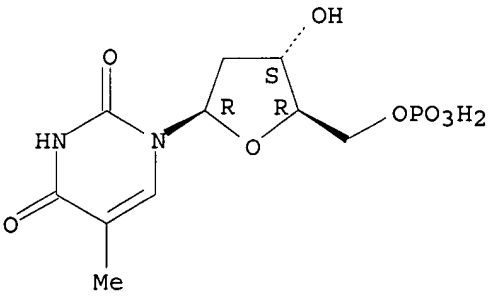
Absolute stereochemistry. Rotation (+).




CM 2

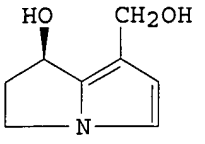
CRN 365-07-1
CMF C10 H15 N2 O8 P

Absolute stereochemistry.




L5 ANSWER 27 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1983:448540 CAPLUS
DN 99:48540

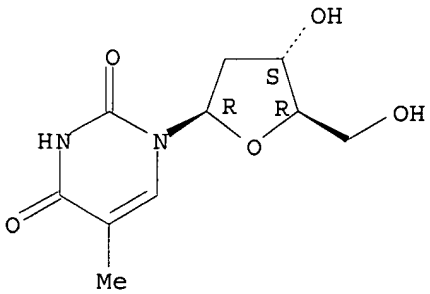
TI Alkylation by dehydroretronecine, a cytotoxic metabolite of some pyrrolizidine alkaloids: an in vitro test
AU Mattocks, A. R.; Bird, I.
CS Toxicol. Unit, Med. Res. Counc. Lab., Carshalton/Surrey, UK
SO Toxicology Letters (1983), 16(1-2), 1-8
CODEN: TOLED5; ISSN: 0378-4274
DT Journal
LA English
GI



I

AB A method is described for detecting alkylation of nucleophiles by dehydroretronecine (DHR)(I) [23107-12-2] in vitro: whereas DHR is rapidly polymerized by acid, alkylation products of DHR were relatively stable and could be detected using Ehrlich reagent. Using this test, N-containing compds. reacting with DHR included pyridine, adenine and guanine derivs.; NAD [53-84-9] and NADP [53-59-8], but not NADH [58-68-4]; cytidine [65-46-3]; barbituric acid [67-52-7] and parabanic acid [120-89-8]; and azide, but not cyanide. Out of 19 amino acids tested, only histidine [71-00-1], tryptophan [73-22-3] and citrulline [372-75-8] showed evidence of reaction. Among S compds., thiols, thiosulfate and sulfite reacted strongly; thioethers and thiocyanate did not. Carbohydrate and phenolic hydroxyls were unreactive but resorcinol [108-46-3] and pyrogallol [87-66-1], having activated benzene nuclei, did react. Enols, especially ascorbic acid [50-81-7], reacted with DHR. Sites of reaction have not yet all been identified. Some DHR alkylations, e.g. of nicotinamide [98-92-0], could be reversible, and such products could in effect extend the life of DHR in vivo.
IT 50-89-5, biological studies
RL: RCT (Reactant); RACT (Reactant or reagent)
(alkylation of, by dehydroretronecine, method for detection of)
RN 50-89-5 CAPLUS
CN Thymidine (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



L5 ANSWER 28 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1968:46395 CAPLUS
DN 68:46395
TI Reactions of enolic sugar derivatives. V. Conversion of thymidine diphosphate D-glucose to thymidine diphosphate

4-keto-6-deoxy-D-glucose, using thymide diphosphate Δ-glucose uridine-14C-5-3H

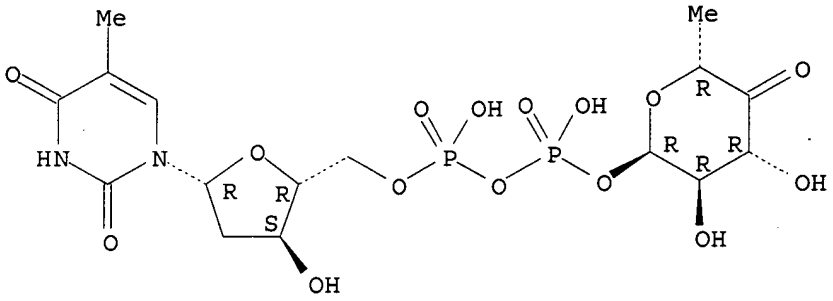
AU Herrmann, Klaus; Lehmann, Jochen
CS Univ. Freiburg/Br., Freiburg/Br., Fed. Rep. Ger.

SO European Journal of Biochemistry (1968), 3(3), 369-76
CODEN: EJBCAI; ISSN: 0014-2956
DT Journal
LA English

AB Chemical synthesized thymidine diphosphate (TDP) D-glucose-U-14C-5-3H was converted to TDP-4-keto-6-deoxy-D-glucose-U-14C-6-3H by an enzyme system obtained from Escherichia coli B. The product contained only a minor amount of the tritium originally present in the starting material. Elimination of tritium from the starting material paralleled the formation of the keto product. This result is interpreted as indicating that a 5,6-unsatd. hexose nucleotide is an intermediate in the overall conversion. Part of the tritium eliminated from the 5-position of D-glucose was reincorporated into the 6-position of the end product. The mechanistic implications of these results are discussed. 16 references.

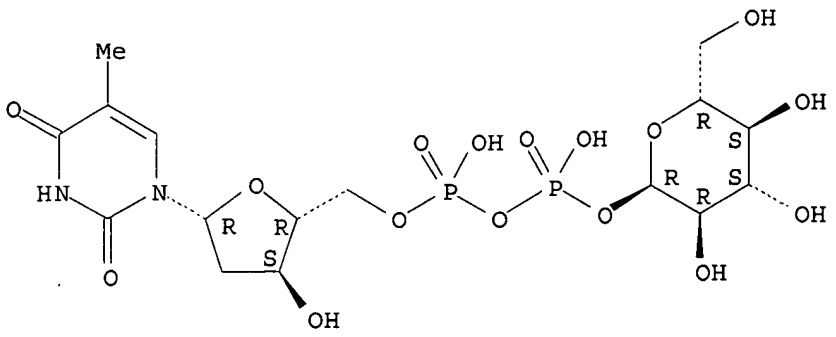
IT 16752-71-9P
RL: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PREP (Preparation)
(formation of, from thymidine diphosphate D-glucose by Escherichia coli enzyme, mechanism of)
RN 16752-71-9 CAPLUS
CN Thymidine 5'-(trihydrogen diphosphate), P'-(6-deoxy-α-D-xylo-hexopyranos-4-ulos-1-yl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



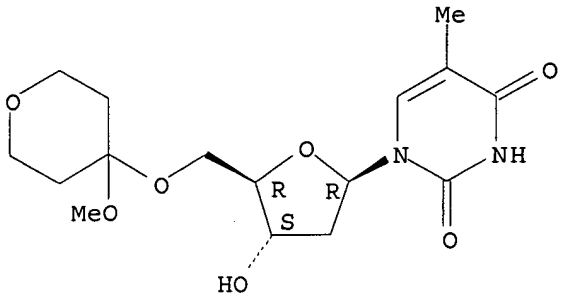
IT 2196-62-5
RL: BIOL (Biological study)
(thymidine diphosphate 4-keto-6-deoxy-D-glucose formation from, by Escherichia coli enzyme, mechanism of)
RN 2196-62-5 CAPLUS
CN Thymidine 5'-(trihydrogen diphosphate), P'-α-D-glucopyranosyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



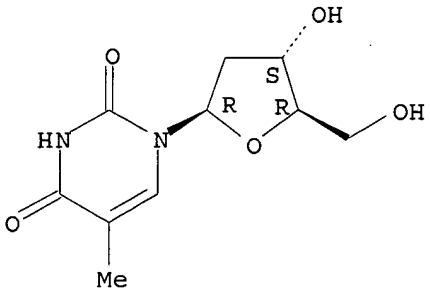
L5 ANSWER 29 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1967:508902 CAPLUS
DN 67:108902
TI Symmetrical alternative to the tetrahydropyranyl protecting group
AU Reese, Colin B.; Saffhill, R.; Sulston, J. E.
CS Univ. Chem. Labs., Cambridge, UK
SO Journal of the American Chemical Society (1967), 89(13), 3366-8
CODEN: JACSAT; ISSN: 0002-7863
DT Journal
LA English
OS CASREACT 67:108902
GI For diagram(s), see printed CA Issue.
AB Use of the tetrahydropyranyl group for protection of optically active alcs. leads to the undesirable introduction of an addnl. asym. C center. The oxytetrahydropyranyl group (tetrahydro-4-pyrone acetal system) is more suitable for the protection of alc. OH groups in oligoribonucleotide synthesis; it was the required acid lability, and gives satisfactory yields of crystalline mono- and diprotected ribonucleoside derivs. The 2'-O-isopropylidene and cyclohexanone acetals of uridine [m. 185° (decomposition) and 149-51°, resp.] were prepared from 3',5'-di-O-acetyluridine (I) and 2-methoxypropene and 1-methoxycyclohexene in 42 and 30% yields, resp., by treatment of I with the enol ether in acid solution, and subsequent treatment with NH3-MeOH. I and excess 5,6-dihydro-4-methoxy-2H-pyran (II) in the presence of p-toluenesulfonic acid, followed by treatment with NH3-MeOH, gave 61% V, m. 167-9°. Similarly, the corresponding thymidine 5'-acetal, m. 169-71°, was prepared from 3'-O-acetylthymidine in 85% yield. When 4,4-dimethoxytetrahydropyran was distilled with 0.1 weight % mesitylenesulfonic acid, 75% II, b. 156-7°, was obtained. In reaction with nucleoside derivs., 8 molar equivs. of II was used per OH to be protected. 3'-O-Acetyluridine and II gave 50% VIb (B = uracil-1), m. 102-4°; VIa (B = uracil-1) was obtained in 51% yield by treating the latter with NH3-MeOH. VIa (B = adenine-9), m. 183-4°, was similarly obtained in 52% yield.
IT 17327-24-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 17327-24-1 CAPLUS
CN Thymidine, 5'-O-(tetrahydro-4-methoxy-2H-pyran-4-yl)- (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



L5 ANSWER 30 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1964:462580 CAPLUS
DN 61:62580
OREF 61:10902a-c
TI Selective modification of uridine and guanosine
AU Kochetkov, N. K.; Budovskii, E. I.; Shibaeva, R. P.
CS Inst. Chem. Natural Products, Moscow
SO Biochimica et Biophysica Acta, Specialized Section on Nucleic Acids and Related Subjects (1964), 87(3), 515-18
CODEN: BBASB7; ISSN: 0926-6550
DT Journal
LA English
AB The reactivity of propiohydroxamic acid (I) in the chemical modification of ribonucleic acid (RNA) was studied. Hydroxamic acid was more selective than hydroxylamine in that it did not affect cytidine or adenosine but did react with nucleosides having an enolizable keto group. This is considered a 2-step process in which the mol. of the reagent adds to the double bond between N-3 and C-4 or N-1 and C-6 of the enol form of the pyrimidine or purine base residue, resp., and a 2nd step where the intermediate products eliminate H2O. This mechanism accounts for the inertness of nucleosides incapable of enolization and was confirmed by the fact that 4-thiouridine and 6-mercaptopurine riboside reacted similarly to the H2O-eliminating compds. I reacted with uridine at pH 9.0 or 10.0. Guanosine and 2-dimethylamino-6-hydroxypurine reacted with I at pH 8, 9, and 10. Hydroxamic acids are potent reagents for the selective modification of nucleosides and nucleic acids.
IT 50-89-5, Thymidine
(propionohydroxamic acid derivative)
RN 50-89-5 CAPLUS
CN Thymidine (8CI, 9CI) (CA INDEX NAME)

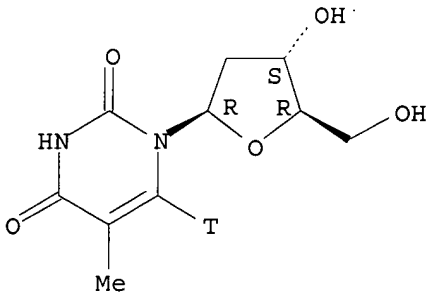
Absolute stereochemistry.



L5 ANSWER 31 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1963:408361 CAPLUS
DN 59:8361

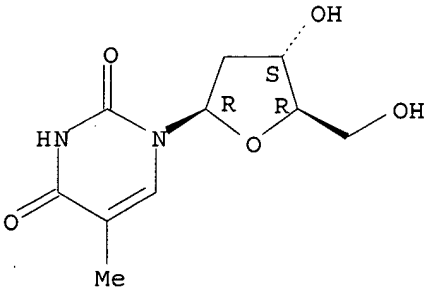
OREF 59:1445e,1446a-b
TI Decomposition of tritium-labeled organic compounds
AU Evans, E. Anthony; Stanford, F. G.
CS Radiochem. Centre, Amersham, UK
SO Nature (London, United Kingdom) (1963), 197, 551-5
CODEN: NATUAS; ISSN: 0028-0836
DT Journal
LA Unavailable
AB In view of the variety of uses of T-labeled compds., e.g. in luminous paints and radio therapy, the decomposition of tritiated amino acids (I), nucleosides (II), purines (III), pyrimidines (IV), steroids (V), and some miscellaneous compds. were studied, and results are tabulated giving sp. activity (mc./millimole), age, storage condition, temperature, method of analysis, solvent system, and % radiochemical purity. It was shown that decomposition was minimized by storage in a suitable solvent, and chemical and secondary decomposition reduced by storage at low temperature Compds. with sp. activities of less than 500 mc./millimole when stored under the best known conditions suffered no serious decomposition for at least one year, and among the most stable classes are I, III, IV, and V, while II at high sp. activity greater than 1 c./millimole belonged to the more sensitive class of compds. 15 references.
IT 13123-05-2, Thymidine-6-t
(decomposition of)
RN 13123-05-2 CAPLUS
CN Thymidine-6-t (7CI, 8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.




IT 50-89-5, Thymidine
(labeled with T, decomposition of)
RN 50-89-5 CAPLUS
CN Thymidine (8CI, 9CI) (CA INDEX NAME)

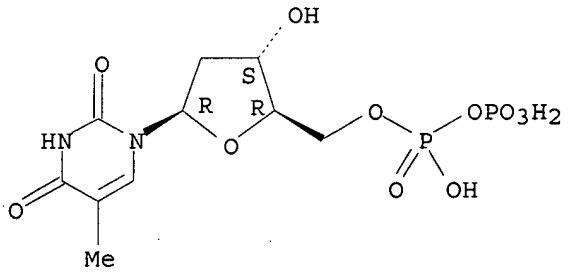
Absolute stereochemistry.




L5 ANSWER 32 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN

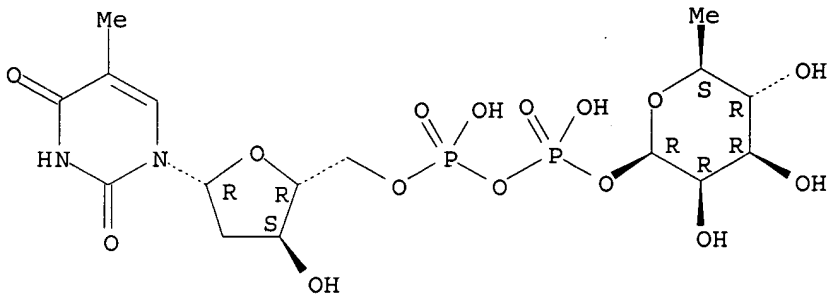
AN 1962:55218 CAPLUS
DN 56:55218
OREF 56:10555c-e
TI Enzymic synthesis of thymidine-linked sugars. III. Mechanism of thymidine diphosphate-L-rhamnose formation
AU Glaser, Luis
CS Washington Univ., St. Louis, MO
SO Biochimica et Biophysica Acta (1961), 51, 169-71
CODEN: BBACAQ; ISSN: 0006-3002
DT Journal
LA English
AB cf. CA 55, 22443e. The formation of thymidine diphosphate (I)-L-rhamnose from I-glucose proceeds through a compound tentatively identified as I-4-keto-6-deoxyglucose (loc. cit.). The formation of rhanmose was further studied by investigating its synthesis in H3-enriched water, employing the rhamnose-synthesizing enzyme from Pseudomonas aeruginosa. In a 2nd experiment, H3-labeled triphosphopyridine nucleotide was used as the reductant. Results were obtained which could be expected if a 4-keto-6-deoxy sugar were reduced, and they suggested that epimerizations occurring at C-3 and C-5 proceeded via a keto-enol transformation.
IT 491-97-4, Thymidine pyrophosphate
(ester with 6-deoxy-D-xylo-hexos-4-ulose in rhamnose formation by enzymes)
RN 491-97-4 CAPLUS
CN Thymidine 5'-(trihydrogen diphosphate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.




IT 2147-59-3, Thymidine pyrophosphate, rhamnosyl ester
(formation by enzymes)
RN 2147-59-3 CAPLUS
CN Thymidine 5'-(trihydrogen diphosphate), P'-(6-deoxy-β-L-mannopyranosyl) ester (9CI) (CA INDEX NAME)

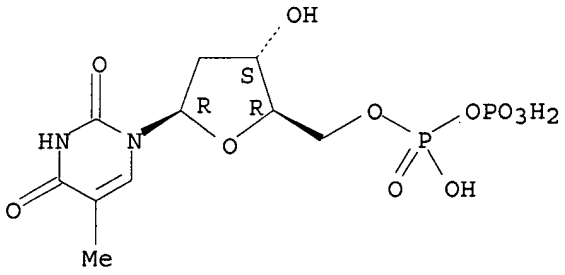
Absolute stereochemistry.




L5 ANSWER 33 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN

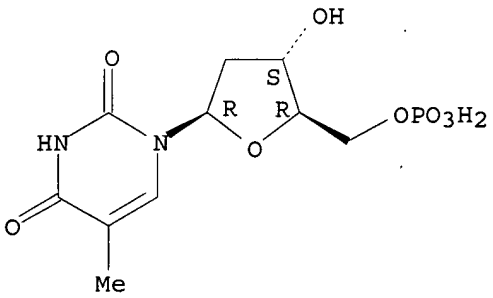
AN 1961:33364 CAPLUS
DN 55:33364
OREF 55:6566h-i,6567a
TI Chemical polynucleotide synthesis from thymidylic acid and enol phosphates
AU Cramer, F.; Wittmann, R.
SO Angew. Chem. (1960), 72, 628
DT Journal
LA Unavailable
AB Oligonucleotides were prepared from thymidine 3'-phosphate (I) by reaction with (EtO)2P(:O)OC(OEt):CHCOOEt (II) (CA 52, 19910d). The di-Et ester of thymidine 3'-pyrophosphate was suggested as the active intermediate. Reaction of 0.1 millimole I as pyridinium salt with 0.5 millimole II in 1 cc. Me2NCHO at 70° or 50° gave (1) oligonucleotide made up of -5'-phosphorylthymidylyl-(3'-5')-thymidine-(3'-group,) (2) same oligonucleotide with the (2'-3') linkage, (3)I, (4) thymidine 2',3'-phosphate, and (5) 3',5'-pyrophosphate dinucleotide of thymidine. By chromatographic separation on paper and use of iso-PrOH:NH3:H2O (7:1:2) the resp. Rf values were determined as 0.0, 0.05-0.08, 0.16, 0.21-0.22, and 0.27.
IT 491-97-4, Thymidine pyrophosphate
(esters with nucleosides, in oligonucleotide formation)
RN 491-97-4 CAPLUS
CN Thymidine 5'-(trihydrogen diphosphate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.




IT 365-07-1, Thymidylic acid
(polynucleotide formation from)
RN 365-07-1 CAPLUS
CN 5'-Thymidylic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.




=> file reg

| COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION |
|---|---|---|
| FULL ESTIMATED COST | 182.52 | 350.99 |

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

| | SINCE FILE ENTRY | TOTAL SESSION |
|---|---|---|
| CA SUBSCRIBER PRICE | -24.75 | -24.75 |

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=>
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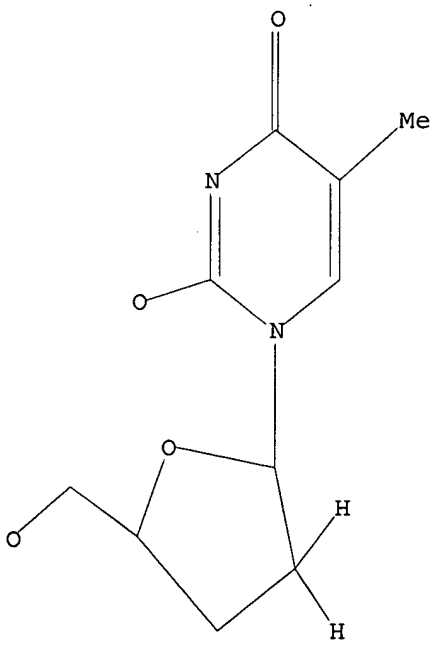
L6 STRUCTURE UPLOADED

=> d l6
L6 HAS NO ANSWERS
L6 STR



Structure attributes must be viewed using STN Express query preparation.

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=> s l1 sss sam
SAMPLE SEARCH INITIATED 16:28:52 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED -     2883 TO ITERATE

 69.4% PROCESSED     2000 ITERATIONS                                 50 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:        54440 TO    60880
PROJECTED ANSWERS:           38253 TO    43681

L7           50 SEA SSS SAM L1

=> s l6 sss sam
SAMPLE SEARCH INITIATED 16:29:14 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED -     2883 TO ITERATE

 69.4% PROCESSED     2000 ITERATIONS                                 50 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:        54440 TO    60880
PROJECTED ANSWERS:           38253 TO    43681

L8           50 SEA SSS SAM L6

=> s l6 sss full
FULL SEARCH INITIATED 16:29:52 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -    61666 TO ITERATE

100.0% PROCESSED    61666 ITERATIONS                            44094 ANSWERS
SEARCH TIME: 00.00.01

L9        44094 SEA SSS FUL L6

=> file reg
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                      ENTRY    SESSION
FULL ESTIMATED COST                                   172.22     523.21

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                      ENTRY    SESSION
CA SUBSCRIBER PRICE                                     0.00     -24.75

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STRUCTURE FILE UPDATES:   23 JUL 2006  HIGHEST RN 895579-80-3
DICTIONARY FILE UPDATES:  23 JUL 2006  HIGHEST RN 895579-80-3

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conducting SmartSELECT searches.

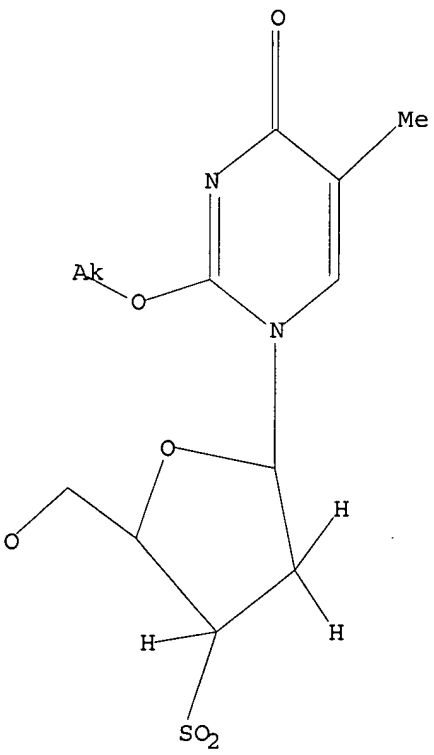
REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document. For information
on property searching in REGISTRY, refer to:

http://www.cas.org/ONLINE/UG/regprops.html

=>
Uploading C:\Program Files\Stnexp\Queries\10736084-2.str

L10 STRUCTURE UPLOADED

=> d l10
L10 HAS NO ANSWERS
L10 STR




Structure attributes must be viewed using STN Express query preparation.

=> s l10 sss sam
SAMPLE SEARCH INITIATED 16:36:49 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 18 TO ITERATE

100.0% PROCESSED 18 ITERATIONS 0 ANSWERS
SEARCH TIME: 00.00.02

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**

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PROJECTED ITERATIONS:          106 TO      614
PROJECTED ANSWERS:               0 TO        0

L11           0 SEA SSS SAM L10

=> s l10 sss full
FULL SEARCH INITIATED 16:37:03 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -      511 TO ITERATE

100.0% PROCESSED      511 ITERATIONS                                  0 ANSWERS
SEARCH TIME: 00.00.01

L12           0 SEA SSS FUL L10

=> dis hist

     (FILE 'HOME' ENTERED AT 16:20:34 ON 25 JUL 2006)

     FILE 'REGISTRY' ENTERED AT 16:20:58 ON 25 JUL 2006
L1               STRUCTURE UPLOADED
L2            50 S L1 SSS SAM
L3         44094 S L1 SSS FULL

     FILE 'CAPLUS' ENTERED AT 16:23:16 ON 25 JUL 2006
L4         18438 S L3 AND(PROCESS OR METHOD OR PRODUCTION OR SYNTHE?)
L5            33 S L4 AND ENOL?

     FILE 'REGISTRY' ENTERED AT 16:28:23 ON 25 JUL 2006
L6               STRUCTURE UPLOADED
L7            50 S L1 SSS SAM
L8            50 S L6 SSS SAM
L9         44094 S L6 SSS FULL

     FILE 'REGISTRY' ENTERED AT 16:36:14 ON 25 JUL 2006
L10              STRUCTURE UPLOADED
L11            0 S L10 SSS SAM
L12            0 S L10 SSS FULL
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